

PLANNING SUBMITTAL FORM		
Permit info:	SUBFY2016-1	
Application Date:	6.14.16	Rec'd by: <i>VG</i>
FOR OFFICE USE ONLY		

6015 Glenwood Street ▪ Garden City, ID 83714•208.472.2921(tel.)
208.472.2926 (FAX) ▪ www.gardencityidaho.gov/office.com

APPLICANT	PROPERTY OWNER
Name: Jimmy O'Connor	Name: Bill Truax
Company: Hutchison Smith Architects	Company: Parkway Station LLC
Address: 270 N. 27th Street	Address: 4232 Adams
City: Boise	City: Garden City
State: ID Zip: 83702	State: ID Zip: 83714
Tel.: 208-338-1212	Tel.: 208-863-9517
FAX: 208-338-0011	FAX:
E-mail: joconnor@hsaarchitects.com	E-mail: Truaxbill@gmail.com

ACTION REQUESTED (check all that apply)

ALL BLUEPRINTS MUST BE FOLDED INTO 8^{1/2}" X 11" SIZE WITH THE TITLE BLOCK/PANEL FACE UP
SO AS TO FIT WITHIN A LEGAL SIZE FILE FOLDER

- | | | |
|--|---|--|
| <input type="checkbox"/> Appeal
<input type="checkbox"/> Lot Line Adjustment
<input type="checkbox"/> City Code Text Amendment
<input type="checkbox"/> Sign Permit
<input type="checkbox"/> Specific Area Plan
<input type="checkbox"/> Comprehensive Plan Amendment
<input type="checkbox"/> Conditional (special) Use Permit
<input type="checkbox"/> Temporary Use Permit | <input type="checkbox"/> Design Review
<input checked="" type="checkbox"/> Final Plat
<input type="checkbox"/> Flood Plain Dev
<input type="checkbox"/> Variance
<input type="checkbox"/> MFH Installation

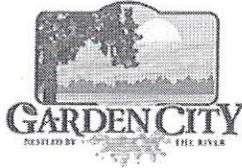
<input type="checkbox"/> Minor Land Division
<input type="checkbox"/> Ability to Serve-CUP, DSR or SUB if applicable | <input type="checkbox"/> Preliminary Plat
<input type="checkbox"/> Preliminary PUD
<input type="checkbox"/> Re-zone
<input type="checkbox"/> Zoning Certificate
<input type="checkbox"/> MFH Removal
<input type="checkbox"/> Minor PUD |
|--|---|--|

PROPERTY INFORMATION

Site address: 4232 N.Adams/418 & 500 42nd Street, Garden City, ID		
Subdivision Name: Fairview Acres Sub. No. 3	Lot: 1-6	Block: 17
Tax Parcel Number:	Zoning: C-2/M	Total Acres: 4.07
Proposed Use: (M) Mixed Use	Floodplain: yes no	

I consent to this application and hereby certify that information contained on this application and in the accompanying materials is correct to the best of my knowledge. I will hold harmless and indemnify the City of Garden City from any and all claims and/or causes of action from or an outcome of the issuance of a permit from the City.

 ----- signature of the applicant	6/13/16 ----- (date)	----- signature of the owner	----- (date)
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LAND DIVISION

Permit info: SUB EY 2012-1
 Application Date: 12.14.12 Rec'd by: Vg
 FOR OFFICE USE ONLY

6015 Glenwood Street ▪ Garden City, ID 83714 ▪ 208.472.2921 (tel.)
 208.472.2926 (FAX) ▪ www.gardencityidaho.govoffice.com

CONTACT INFORMATION

APPLICANT

Name: Jimmy O'Connor- HSA Address: 270 N 27th Street
 Email: joconnor@hsaarchitects.com Boise, Idaho 83702
 Phone: (208) 3381212

OWNER

Name: Parkway Station LLC- Bill Truax Address: 4232 N Adams Street
 Email: truaxbill@gmail.com Garden City, Idaho 83714
 Phone: (208) 863-9517

PROPERTY INFORMATION

Subdivision/Project Name: Parkway Station

Site address: 4232 N Adams, 418 E 42nd Street, 500 E 42nd Street

Description of Existing Use(s): Construction Yard, trailer homes

Description of Surrounding Uses: Residential on the east, west and south sides. Boys and Girls Club to the north.

APPLICATION INFORMATION

- Minor Land Division Preliminary Plat Planned Unit Development
 Combined Preliminary/Final Plat Final Plat Condominium

If final plat have there been any changes since the preliminary plat? Y/ N

Number of residential lots 41 Number of commercial lots 0 Number of mixed use lots 1

Number of common lots 8 Square feet of common open space 1.26 ac

Are any improvements planned within the common open space area? If so, specify.
common access, landscaping, community garden

What public services and facilities are required for this development? Fire Protection Police Protection Water Sewer Drainage
 Streets Schools

What housing types are proposed? MARK ALL THAT APPLY
 Single Family Condos _____ Townhomes Live/Work _____
 Manufactured/ Mobile Homes _____ N/A _____

Is this plat a portion of a larger land holding intended for subsequent development? If yes, please explain. Yes- Phase 2 will address the proposed mixed use lot located along

Adams Street

Is the project within the Floodplain? No

Are there any proposed uses not allowed in the zoning district where the project is located? If so, specify. If so, what is the gross land area devoted to such uses? No

What is the effect of this site development on roadways and traffic conditions?

The adjacent local streets are adequate to accommodate the proposed development

Are there new roads proposed/required?

Yes- Private Roads and Drives

Are there new ingress/egress being proposed?

Yes- relocated curb cuts

How has off-street parking and loading been arranged and sized to prevent traffic congestion? Off street parking will be provided via garages and shared on site parking

How has vehicular and pedestrian circulation been arranged with respect to adjacent facilities and internal circulation? Curb cuts have been lined up as

necessary and pedestrian connections are provided to streets and adjacent parks

Has there been connection to or access provided for future connections to bicycle and pedestrian pathways or regional transit? Yes

What neighborhood characteristics exist or are planned which make this development compatible with the neighborhood and adjoining properties?

Community open space/ garden and access to the adjacent park and greenbelt

What is the effect of this site development on the adequacy of storm and surface water facilities? All storm drainage will be contained on site

How will the design create a sense of place (usable open space, public art, visual focus points)? *SEE BELOW

How has landscaping been used to protect existing trees, utilize existing features, create harmony with adjacent development and prevent erosion and dust?

No landscaping of value exists. A new landscape will be implemented per plans.

What type of water will be used for landscaping? _____Irrigation - Non-Potable
_____Irrigation - Potable _____City Water System

Have native or drought resistant plants been utilized in the landscaping plan? If so what types and what percentage of the overall landscape is dedicated to these plants? No native plants are proposed; however, plants chosen for the project are not high use plants. Minimal lawn is proposed and an efficient irrigation system will be implemented.

What sustainable concepts have been incorporated into the design?

Higher residential densities are proposed, community garden, all buildings shall be energy star rated.

*The town homes will have a similar height and setback as the Trailwinds project. The adjacent sidewalk will have lighting and trees to mirror the improvements across 42nd Street. Together the projects will create a unique and vibrant corridor that is pedestrian friendly.

APPLICATION INFORMATION REQUIRED (PLEASE CHECK)

NOTE: INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED UNDER ANY CIRCUMSTANCES.

Date of Pre-Application Conference _____

Date of Sketch Plat Approval _____

- A CD CONTAINING ALL APPLICATION MATERIALS**
- Planning Submittal Form
- Preliminary Title Report
- Legal Description
- Pre-application conference form
- Neighborhood Map
- Eleven (11) Sketch Map (Required for subs with 4 or more proposed lots)
- Eleven (11) Subdivision Map
- Eleven (11) Site Plan
- Eleven (11) Landscape Plan
- Eleven (11) Schematic Drawings
- Lighting Plan
- Topographic Survey
- Grading Plan
- Two (2) Soils Report
- Two (2) Hydrology Report
- Two (2) Engineering Drawings and Specifications
- Two (2) Natural Hazard and Resources Analysis
- Two (2) Dedications and Easements
- Two (2) Covenants and Deed Restrictions
- Ability to Serve Letter
- Neighborhood Meeting Verification
- Affidavit of Legal Interest
- Affidavit of Posting and Photos (Due 7 days before the hearing)
- Irrigation/Ditch Company Information Form
- Locations, elevations, and materials of proposed signage or Master Sign Plan

N/A

N/A

N/A

FOR CONDOMINIUM SUBDIVISIONS:

IN ADDITION TO THE ABOVE REQUIRED DOCUMENTS AND INFORMATION, THE FOLLOWING MUST BE SUBMITTED:

- Diagrammatic floor plans of the building or buildings built or to be built in sufficient detail to identify each unit, its relative location and approximate dimensions, showing elevations where multi-level or multi-story structures are diagrammed
- A declaration and by-laws consistent with the provisions contained in Idaho Code 15-1505

INFORMATION REQUIRED ON COMPLIANCE STATEMENT (PLEASE CHECK):

- Statement explaining how the proposed structure(s) is compliant with the standards of review for the proposed application

INFORMATION FOR STATEMENT OF INTENT(PLEASE CHECK):

- Should include purpose, scope, and intent of project

- Information concerning noxious uses, noise, vibration, and any other aspects of the use or structure that may impact adjacent properties or the surrounding community

INFORMATION FOR PRELIMINARY TITLE REPORT (PLEASE CHECK):

- Document confirming property has been purchased contingent to approvals by city and other agencies
- Document should confirm if there are liens on property and if there are other issues with title
- Document typically generated by lender or title company

INFORMATION FOR LEGAL DESCRIPTION (PLEASE CHECK):

- A document legally describing the property.
- Must have Ada County instrument number or county seal inscribed.

INFORMATION FOR SKETCH PLAT (PLEASE CHECK):

- A plat preliminary to the preparation of a preliminary plat that show the basic outline of the plat, including lots, roads, and dedicated sites.
- Required for subs with 4 or more proposed lots

INFORMATION FOR PRE-APPLICATION FORM (PLEASE CHECK):

- A form signed by the planning official certifying a pre-application conference took place for this application prior to applying. The sign-in sheet of the pre-application conference should also be attached.

INFORMATION REQUIRED ON NEIGHBORHOOD MAP (PLEASE CHECK):

- 8 ½" x 11" size minimum
- Location of contiguous lots and lot(s) immediately across from any public or private street, building envelopes and/or existing buildings and structures at a scale not less than one inch equals one hundred feet (1" = 100')
- Impact of the proposed siting on existing buildings, structures, and/or building envelopes

INFORMATION REQUIRED ON PRELIMINARY SUBDIVISION MAP (PLEASE CHECK):

- 30" x 42" minimum size
- Scale no less than one inch (1") to one hundred feet (100')
- The names, addresses, and telephone numbers of the planners, engineers, surveyors or other persons who designed the subdivision and prepared the plat
- The legal description of the proposed subdivision, and a topographical map showing the proposed subdivision at a scale of not less than one inch (1") to one hundred feet (100')
- The intended use of the lot such as: residential single-family, duplex, townhouse and multiple housing, commercial, industrial or recreational;
- A proposed building envelope shall be designated and dimensioned on each lot to demonstrate that a building can comply with the required setbacks. This building footprint is not binding on future building on the lot.
- Streets and public rights of way, including proposed street names and dimensions
- Blocks, if any, building envelopes and lot lines as required by subsection 10-4-4F of this Title, showing the dimensions and numbers of each. In addition to providing this information on the plat or supporting addenda, the applicant shall stake the perimeters of each lot and the center of its building envelope sufficiently to permit the Commission to locate the same when inspecting the site of the proposed subdivision

- Contour lines, shown at two foot (2') intervals, reference to an established bench mark, including location and elevation
- Location of any proposed or existing utilities, including, but not limited to, domestic water supply, storm and sanitary sewers, irrigation laterals, ditches, drainages, bridges, culvers, water mains, fire hydrants, and their respective profiles
- Location of bicycle parking
- Location of existing and proposed street lights
- Location of existing and proposed pedestrian and bicycle pathways

INFORMATION REQUIRED ON SITE PLAN(PLEASE CHECK):

- 24" x 36" size minimum
- Scale not less than 1" = 20', legend, and north arrow.
- Property boundary, dimensions, setbacks and parcel size.
- Location of the proposed building, improvement, sign, fence or other structure, and the relationship to the platted building envelope and/or building zone
- Building envelope dimensions with the center of the envelope location established in relation to the property lines
- Adjacent public and private street right of way lines
- Total square footage of all proposed structures calculated for each floor. If the application is for an addition or alteration to an existing building or structure, then the new or altered portions shall be clearly indicated on the plans and the square footage of new or altered portion and the existing building shall be included in the calculations
- For uses classified as drive-through, the site plan shall demonstrate safe pedestrian and vehicular access and circulation on the site and between adjacent properties as required in Section 8-2C-13 of Title 8.
- The site plan shall demonstrate safe vehicular access as required in 8-4E-4
- Driveways, access to public streets, parking with stalls, loading areas.
- Sidewalks, bike and pedestrian paths.
- Berms, walls, screens, hedges and fencing.
- Location and width of easements, canals, ditches, drainage areas.
- Location, dimensions and type of signs.
- Trash storage and mechanical equipment and screening.
- Parking including noted number of regular, handicap and bike parking as well as dimensions of spaces and drive aisles depicted on plan
- Log depicting square footage of impervious surface, building and landscaping
- Location and height of fences and exterior walls
- Location and dimensions of outdoor storage areas
- Location of utilities and outdoor serviced equipment and areas
- Location of any proposed public art
- Location of any proposed exterior site furniture
- Location of any exterior lighting
- Location of any existing or proposed signage

INFORMATION REQUIRED ON LANDSCAPE PLAN (PLEASE CHECK):

- 24" x 36" size minimum
- Scale the same as the site plan.
- Type, size, and location of all existing and proposed plants, trees, and other landscape materials.
- Size, location and species of existing vegetation labeled to remain or to be removed.
- All areas to be covered by automatic irrigation, including location of proposed irrigation lines.
- Cross section through any special features, berms, and retaining walls.
- A plant list of the variety, size, and quantity of all proposed vegetation

- Log of square footage of landscaping materials corresponding to location
- Proposed storm water systems
- Locations and dimensions of open space

INFORMATION REQUIRED ON SCHEMATIC DRAWINGS (PLEASE CHECK):

- 11" x 17" size minimum
- Scale not less than 1/8 inch = 1 foot (1/8" = 1')
- Floor plans; elevations, including recorded grade lines; or cross sections that describe the highest points of all structures and/or buildings, showing relationship to recorded grade existing prior to any site preparation, grading or filing
- Decks, retaining walls, architectural screen walls, solid walls, and other existing and proposed landscape features shall be shown in elevations and sections with the details to show the completed appearance of those structures
- Overall dimensions of all proposed structures
- Specifications on exterior surface materials and color
Sample materials (as determined by the staff)

INFORMATION REQUIRED ON LIGHTING PLAN (PLEASE CHECK):

- 11" x 17" size minimum
- Location, type, height, lumen output, and luminance levels of all exterior lighting
- Refer to Garden City Code 8-4A-6 for outdoor lighting requirements
- Location of municipal street lights

INFORMATION FOR TOPOGRAPHIC SURVEY (PLEASE CHECK):

- The topographic map is a map of the application site and adjoining parcels prepared by an engineer and/or land surveyor, and at a scale of not less than one inch (1") to twenty feet (20'). If the site has been known to have been altered over time, then the applicant shall provide evidence of the natural topography of the site.

INFORMATION REQUIRED ON GRADING PLAN (PLEASE CHECK):

- 11" x 17" size minimum
- Scale not less than one inch equals twenty feet (1" = 20')
- Two foot (2') contours for the entire proposal site
- One foot (1') contours for details, including all planimetric features
- Existing site features, including existing structures, trees, streams, canals, and floodplain hazard areas
- Existing easement and utility locations
- Approximate limiting dimensions, elevations, and finish contours to be achieved by the contemplated grading within the project, showing all proposed cut and fill slopes, drainage channels, and related construction; and finish and spot grade elevations for all wall and fence construction, and paved and recreational surfaces
- Slope and soil stabilization and re-vegetation plan, including identification of areas where existing or natural vegetation will be removed and the proposed method of re-vegetating. Show all areas of disturbance and construction fencing location; re-vegetation is required for all disturbed areas
- Proposed storm water systems

INFORMATION FOR SOILS REPORT (PLEASE CHECK):

- Prepared by a licensed engineer
- Report showing the nature, distribution, and strength of existing soil;
- Conclusions and recommendations for grading procedures

- Opinions and recommendations regarding the adequacy of the soil for the proposed development
- The design criteria for any corrective measures which are recommended

INFORMATION FOR HYDROLOGY REPORT(PLEASE CHECK):

- Prepared by a licensed engineer
- Description of the hydrological conditions existing within the proposed site, the adequacy of the existing conditions for the proposed project and the design criteria for any recommended corrective measures
- Map or drawing showing existing surface drainage patterns in the proposed site and identifying any anticipated changes in those patterns due to the project development
- For preliminary plat: Preliminary plans and approximate locations of all surface and subsurface drainage devices or other devices to be employed in controlling drainage water within the project site, including proposed, existing, and natural drainage swales, culverts, catch basins, and subsurface drain piping
- For final plat: A storm drainage plan shall be submitted showing compliance with the standards of section 8-4B-1. The storm drainage plan shall include:
 - a. A map indicating the on-site and off-site drainage applicable to the site
 - b. Detailed engineering plans of all subsurface drainage improvements to be constructed as a part of the proposed development
 - c. Location of all drainage easements, or drainage rights of way
- For a subdivision within a floodplain, documentation shall be provided that will show and explain at the following to demonstrate conformance with Chapter 3, Article B. Flood Hazard. Location of all planned improvements:
 - a. The location of the floodway and the floodway fringe per engineering practices as specified by the Army Corp of Engineers
 - b. The location of the present water channel
 - c. Any planned re-routing of waterways
 - d. All major drainage ways
 - e. Areas of frequent flooding
 - f. Means of flood proofing buildings, and means of insuring loans for improvements within the floodplain

INFORMATION FOR ENGINEERING DRAWINGS AND SPECIFICATIONS (PLEASE CHECK):

- Prepared by a licensed engineer
- The engineering drawings and specifications are for streets, water systems, sewers, and other required public improvements to support the proposal
- The plans shall contain sufficient information and detail to enable the Planning Official to make a determination as to conformance of the proposed improvements to applicable regulations, ordinances, and standards
- For a sexually oriented business: The applicant shall provide evidence certified by a professional land surveyor licensed in the State of Idaho that the proposed adult entertainment establishment conforms to the separation requirements as set forth in Section 8-2C-33 of this Title

INFORMATION FOR NATURAL HAZARD AND RESOURCES ANALYSIS (PLEASE CHECK):

- Prepared by a licensed engineer
- The natural hazards and resources analysis shall provide an inventory and recommendation regarding natural conditions existing on the site.
- The analysis shall include: significant natural resources existing on the site shall be identified including vegetation; fish and wildlife habitat; and water, including streams and riparian zones. A plan for preservation and/or

mitigation of significant resources should be prepared by a qualified professional.

- For subdivisions within a floodplain: Detained information on the nature, source, and extent of the hazard and the proposed actions to minimize or eliminate danger to public health, safety or property. The analysis shall include the following information:
 - a. The location of existing water channels and drainage ways, floodway, flood plain and base flood elevation
 - b. The location of all planned improvements including dams, dikes, and similar structures
 - c. All planned diversions, alterations or rerouting of channels and drainage ways.

INFORMATION FOR DEDICATIONS AND EASEMENTS (PLEASE CHECK):

- The statement of intent for dedications and/or easements shall include the location, size, dimensions, and purpose.

INFORMATION FOR COVENANTS AND DEED RESTRICTIONS (PLEASE CHECK):

- The draft of any proposed covenants and deed restrictions to be recorded with the plat or plat amendment.

INFORMATION FOR WILL SERVE LETTER(PLEASE CHECK):

- A document from the City Engineer certifying that a property has adequate access to city services.

INFORMATION FOR NEIGHBORHOOD MEETING VERIFICATION (PLEASE CHECK):

- Copy of notice sent to property owners within 300' of an applicable property
- List of notice recipients with names and addresses
- Sign-up sheet from meeting

INFORMATION FOR AFFIDAVIT OF LEGAL INTEREST (PLEASE CHECK):

- A signed affidavit indicating legal interest in a property and application

INFORMATION FOR AFFIDAVIT OF PROPERTY POSTING AND PHOTOS(PLEASE CHECK):

- A signed affidavit affirming that the required sign has been posting on the property ten days before the hearing
- Photos (digital or print) of posted sign

INFORMATION REQUIRED FOR IRRIGATION/DITCH INFORMATION FORM (PLEASE CHECK):

- Required if irrigation canal/irrigation ditch runs through property or along property lines

INFORMATION REQUIRED FOR MASTER SIGN PLAN (PLEASE CHECK):

- Required for commercial or mixed-use developments of two or more buildings
- Location, elevations, and materials of proposed signage

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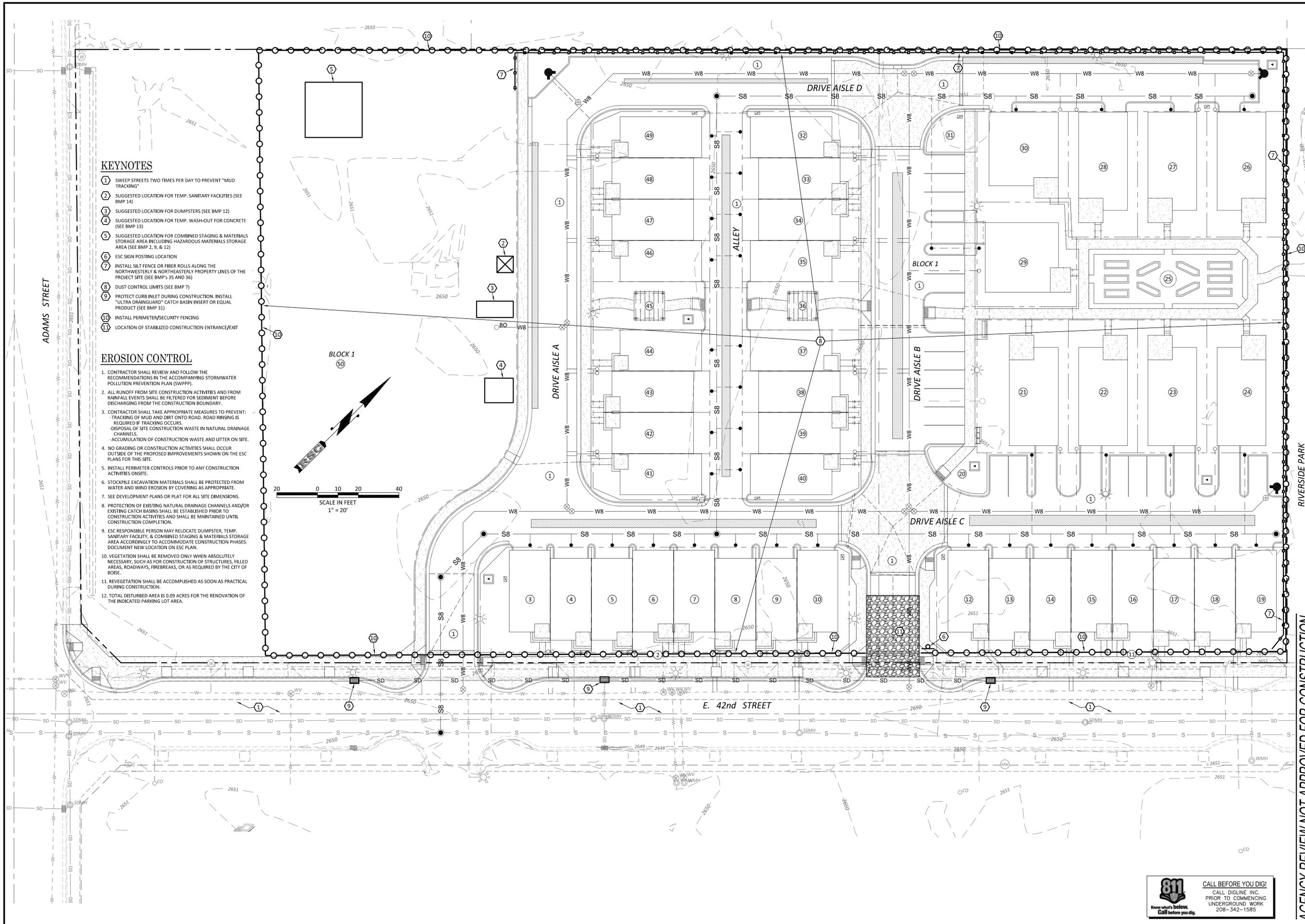
Vicinity Map

Parkway Station

E. 42nd St. & Adams St. / Garden City

SE ¼, SW ¼, Sec-32, T-4N, R-2E



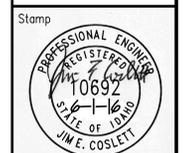
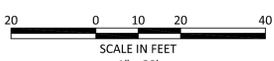


KEYNOTES

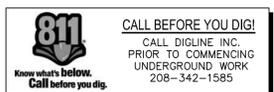
- 1 SWEEP STREETS TWO TIMES PER DAY TO PREVENT "MUD TRACKING"
- 2 SUGGESTED LOCATION FOR TEMP. SANITARY FACILITIES (SEE BMP 14)
- 3 SUGGESTED LOCATION FOR DUMPSTERS (SEE BMP 12)
- 4 SUGGESTED LOCATION FOR TEMP. WASH-OUT FOR CONCRETE (SEE BMP 13)
- 5 SUGGESTED LOCATION FOR COMBINED STAGING & MATERIALS STORAGE AREA INCLUDING HAZARDOUS MATERIALS STORAGE AREA (SEE BMP 2, 9, & 12)
- 6 ESC SIGN POSTING LOCATION
- 7 INSTALL SILT FENCE OR FIBER ROLLS ALONG THE NORTHWESTERLY & NORTHEASTERLY PROPERTY LINES OF THE PROJECT SITE (SEE BMP'S 35 AND 36)
- 8 DUST CONTROL LIMITS (SEE BMP 7)
- 9 PROTECT CURB INLET DURING CONSTRUCTION. INSTALL "ULTRA DRAIN GUARD" CATCH BASIN INSERT OR EQUAL PRODUCT (SEE BMP 31)
- 10 INSTALL PERIMETER/SECURITY FENCING
- 11 LOCATION OF STABILIZED CONSTRUCTION ENTRANCE/EXIT

EROSION CONTROL

1. CONTRACTOR SHALL REVIEW AND FOLLOW THE RECOMMENDATIONS IN THE ACCOMPANYING STORMWATER POLLUTION PREVENTION PLAN (SWPPP).
2. ALL RUNOFF FROM SITE CONSTRUCTION ACTIVITIES AND FROM RAINFALL EVENTS SHALL BE FILTERED FOR SEDIMENT BEFORE DISCHARGING FROM THE CONSTRUCTION BOUNDARY.
3. CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO PREVENT:
 - TRACKING OF MUD AND DIRT ONTO ROAD. ROAD RINSING IS REQUIRED IF TRACKING OCCURS.
 - DISPOSAL OF SITE CONSTRUCTION WASTE IN NATURAL DRAINAGE CHANNELS.
 - ACCUMULATION OF CONSTRUCTION WASTE AND LITTER ON SITE.
4. NO GRADING OR CONSTRUCTION ACTIVITIES SHALL OCCUR OUTSIDE OF THE PROPOSED IMPROVEMENTS SHOWN ON THE ESC PLANS FOR THIS SITE.
5. INSTALL PERIMETER CONTROLS PRIOR TO ANY CONSTRUCTION ACTIVITIES ONSITE.
6. STOCKPILE EXCAVATION MATERIALS SHALL BE PROTECTED FROM WATER AND WIND EROSION BY COVERING AS APPROPRIATE.
7. SEE DEVELOPMENT PLANS OR PLAN FOR ALL SITE DIMENSIONS.
8. PROTECTION OF EXISTING NATURAL DRAINAGE CHANNELS AND/OR EXISTING CATCH BASINS SHALL BE ESTABLISHED PRIOR TO CONSTRUCTION ACTIVITIES AND SHALL BE MAINTAINED UNTIL CONSTRUCTION COMPLETION.
9. ESC RESPONSIBLE PERSON MAY RELOCATE DUMPSTER, TEMP. SANITARY FACILITY, & COMBINED STAGING & MATERIALS STORAGE AREA ACCORDINGLY TO ACCOMMODATE CONSTRUCTION PHASES. DOCUMENT NEW LOCATION ON ESC PLAN.
10. VEGETATION SHALL BE REMOVED ONLY WHEN ABSOLUTELY NECESSARY, SUCH AS FOR CONSTRUCTION OF STRUCTURES, FILLED AREAS, ROADWAYS, FIREBREAKS, OR AS REQUIRED BY THE CITY OF BOISE.
11. REVEGETATION SHALL BE ACCOMPLISHED AS SOON AS PRACTICAL DURING CONSTRUCTION.
12. TOTAL DISTURBED AREA IS 0.09 ACRES FOR THE RENOVATION OF THE INDICATED PARKING LOT AREA.

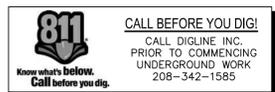
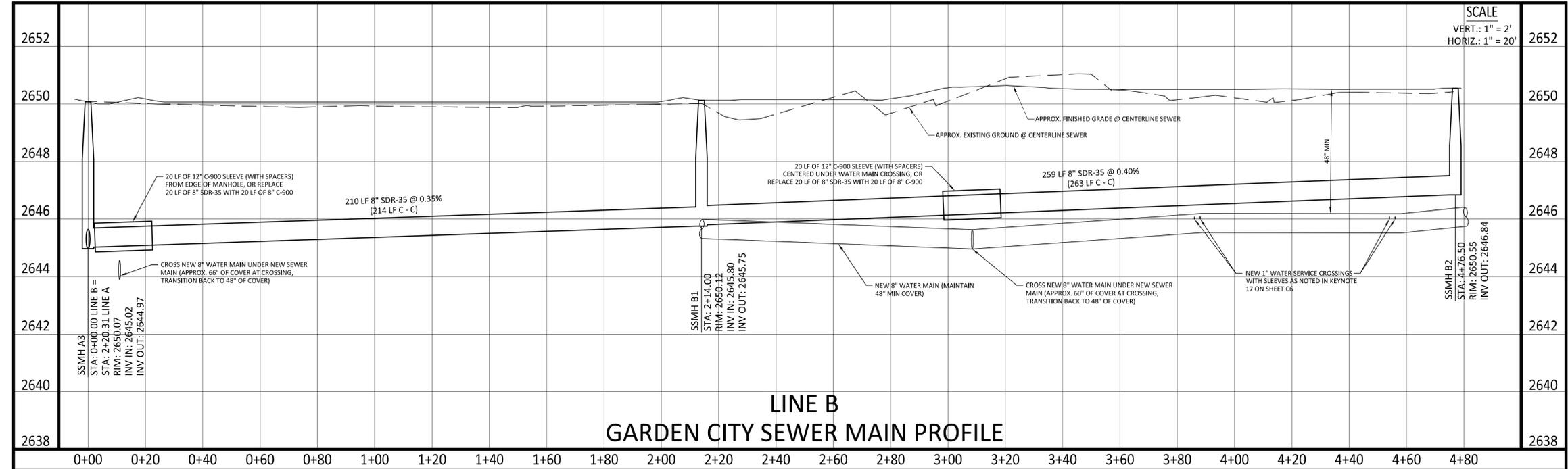
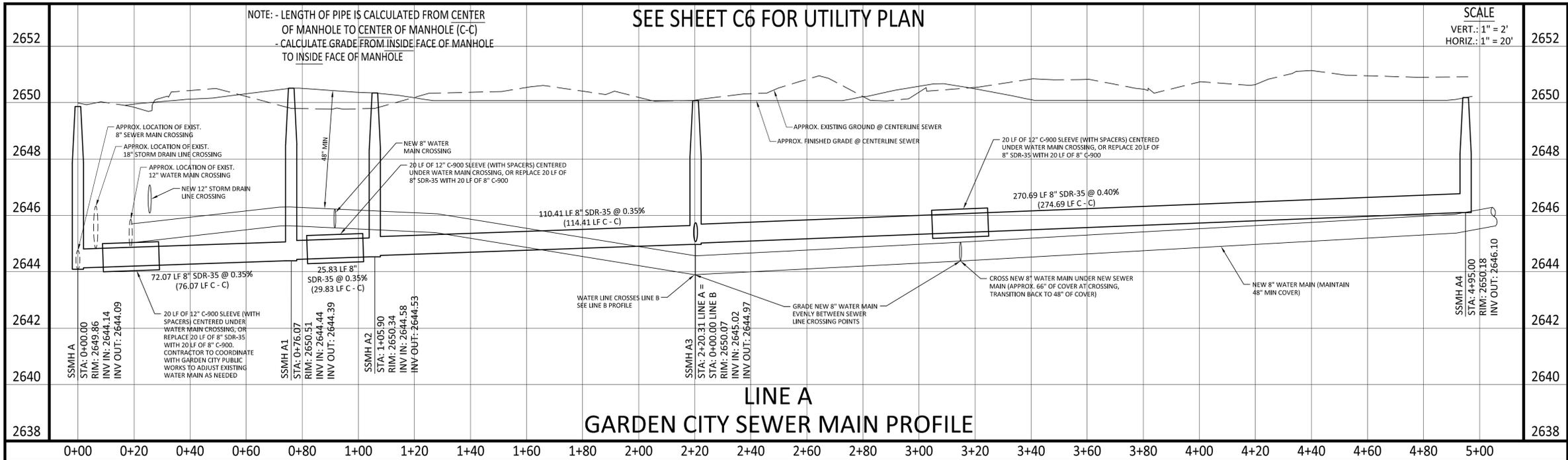


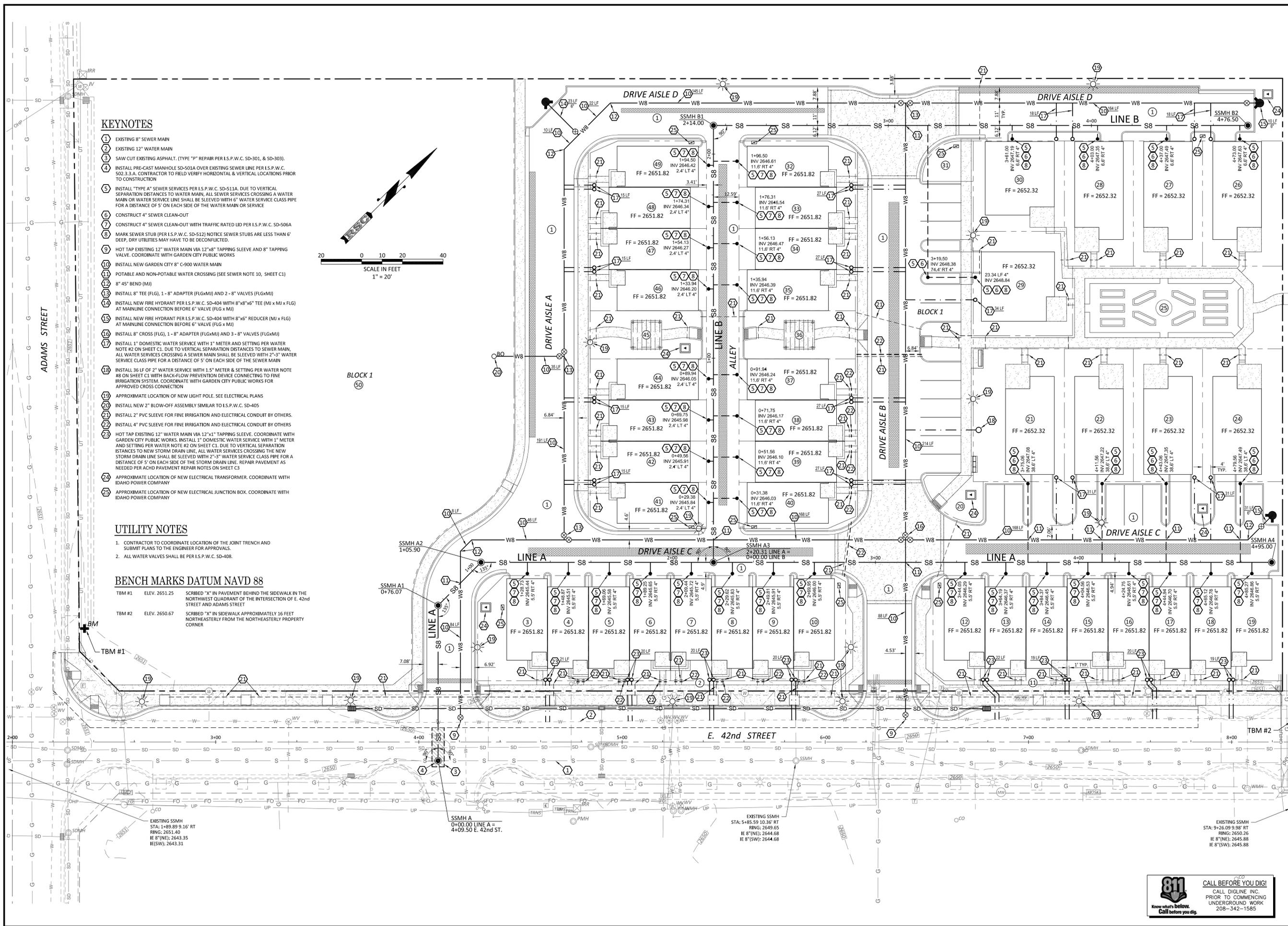
AGENCY REVIEW NOT APPROVED FOR CONSTRUCTION



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AGENCY REVIEW NOT APPROVED FOR CONSTRUCTION





KEYNOTES

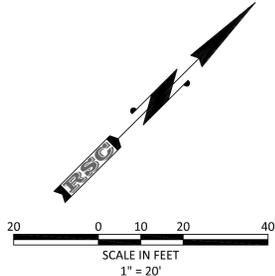
- 1 EXISTING 8" SEWER MAIN
- 2 EXISTING 12" WATER MAIN
- 3 SAW CUT EXISTING ASPHALT. (TYPE "P" REPAIR PER I.S.P.W.C. SD-301, & SD-303)
- 4 INSTALL PRE-CAST MANHOLE SD-501A OVER EXISTING SEWER LINE PER I.S.P.W.C. 502.3.3.A. CONTRACTOR TO FIELD VERIFY HORIZONTAL & VERTICAL LOCATIONS PRIOR TO CONSTRUCTION
- 5 INSTALL "TYPE A" SEWER SERVICES PER I.S.P.W.C. SD-511A. DUE TO VERTICAL SEPARATION DISTANCES TO WATER MAIN, ALL SEWER SERVICES CROSSING A WATER MAIN OR WATER SERVICE LINE SHALL BE SLEEVED WITH 6" WATER SERVICE CLASS PIPE FOR A DISTANCE OF 5' ON EACH SIDE OF THE WATER MAIN OR SERVICE
- 6 CONSTRUCT 4" SEWER CLEAN-OUT
- 7 CONSTRUCT 4" SEWER CLEAN-OUT WITH TRAFFIC RATED LID PER I.S.P.W.C. SD-506A
- 8 MARK SEWER STUB (PER I.S.P.W.C. SD-512) NOTICE SEWER STUBS ARE LESS THAN 6' DEEP, DRY UTILITIES MAY HAVE TO BE DECONFLICTED.
- 9 HOT TAP EXISTING 12" WATER MAIN VIA 12"x8" TAPPING SLEEVE AND 8" TAPPING VALVE. COORDINATE WITH GARDEN CITY PUBLIC WORKS
- 10 INSTALL NEW GARDEN CITY 8" C-900 WATER MAIN
- 11 POTABLE AND NON-POTABLE WATER CROSSING (SEE SEWER NOTE 10, SHEET C1)
- 12 8" 45° BEND (M)
- 13 INSTALL 8" TEE (FLG), 1-8" ADAPTER (FLGxM) AND 2-8" VALVES (FLGxM)
- 14 INSTALL NEW FIRE HYDRANT PER I.S.P.W.C. SD-404 WITH 8"x8"x6" TEE (M x M) x FLG AT MAINLINE CONNECTION BEFORE 6" VALVE (FLG x M)
- 15 INSTALL NEW FIRE HYDRANT PER I.S.P.W.C. SD-404 WITH 8"x6" REDUCER (M x FLG) AT MAINLINE CONNECTION BEFORE 6" VALVE (FLG x M)
- 16 INSTALL 8" CROSS (FLG), 1-8" ADAPTER (FLGxM) AND 3-8" VALVES (FLGxM)
- 17 INSTALL 1" DOMESTIC WATER SERVICE WITH 1" METER AND SETTING PER WATER NOTE #2 ON SHEET C1. DUE TO VERTICAL SEPARATION DISTANCES TO SEWER MAIN, ALL WATER SERVICES CROSSING A SEWER MAIN SHALL BE SLEEVED WITH 2"-3" WATER SERVICE CLASS PIPE FOR A DISTANCE OF 5' ON EACH SIDE OF THE SEWER MAIN
- 18 INSTALL 3/4" LF OF 2" WATER SERVICE WITH 1.5" METER & SETTING PER WATER NOTE #8 ON SHEET C1 WITH BACK-FLOW PREVENTION DEVICE CONNECTING TO FINE IRRIGATION SYSTEM. COORDINATE WITH GARDEN CITY PUBLIC WORKS FOR APPROVED CROSS CONNECTION
- 19 APPROXIMATE LOCATION OF NEW LIGHT POLE. SEE ELECTRICAL PLANS
- 20 INSTALL NEW 2" BLOW-OFF ASSEMBLY SIMILAR TO I.S.P.W.C. SD-405
- 21 INSTALL 2" PVC SLEEVE FOR FINE IRRIGATION AND ELECTRICAL CONDUIT BY OTHERS.
- 22 INSTALL 4" PVC SLEEVE FOR FINE IRRIGATION AND ELECTRICAL CONDUIT BY OTHERS
- 23 HOT TAP EXISTING 12" WATER MAIN VIA 12"x1" TAPPING SLEEVE. COORDINATE WITH GARDEN CITY PUBLIC WORKS. INSTALL 1" DOMESTIC WATER SERVICE WITH 1" METER AND SETTING PER WATER NOTE #2 ON SHEET C1. DUE TO VERTICAL SEPARATION DISTANCES TO NEW STORM DRAIN LINE, ALL WATER SERVICES CROSSING THE NEW STORM DRAIN LINE SHALL BE SLEEVED WITH 2"-3" WATER SERVICE CLASS PIPE FOR A DISTANCE OF 5' ON EACH SIDE OF THE STORM DRAIN LINE. REPAIR PAVEMENT AS NEEDED PER ACHD PAVEMENT REPAIR NOTES ON SHEET C3
- 24 APPROXIMATE LOCATION OF NEW ELECTRICAL TRANSFORMER. COORDINATE WITH IDAHO POWER COMPANY
- 25 APPROXIMATE LOCATION OF NEW ELECTRICAL JUNCTION BOX. COORDINATE WITH IDAHO POWER COMPANY

UTILITY NOTES

1. CONTRACTOR TO COORDINATE LOCATION OF THE JOINT TRENCH AND SUBMIT PLANS TO THE ENGINEER FOR APPROVALS.
2. ALL WATER VALVES SHALL BE PER I.S.P.W.C. SD-408.

BENCH MARKS DATUM NAVD 88

TBM #1	ELEV. 2651.25	SCRIBED "X" IN PAVEMENT BEHIND THE SIDEWALK IN THE NORTHWEST QUADRANT OF THE INTERSECTION OF E. 42nd STREET AND ADAMS STREET
TBM #2	ELEV. 2650.67	SCRIBED "X" IN SIDEWALK APPROXIMATELY 16 FEET NORTHEASTERLY FROM THE NORTHEASTERLY PROPERTY CORNER



AGENCY REVIEW NOT APPROVED FOR CONSTRUCTION

HUTCHISON SMITH ARCHITECTS

270 North 27th St. Boise, Idaho 83702
 (208) 338-1212 Fax (208) 338-0011

PROJECT: RSC 16-14
 FILE: Parkway UTLL.dwg
 DATE: June 1, 2016
 DRAWN: JDF
 REVISIONS:

MIXED USE RESIDENTIAL PARKWAY STATION
 E. 42nd ST
 UTILITY PLAN

GARDEN CITY, ID.

6

PROFESSIONAL ENGINEER
 No. 10692
 STATE OF IDAHO
 J.W.E. COSLETT

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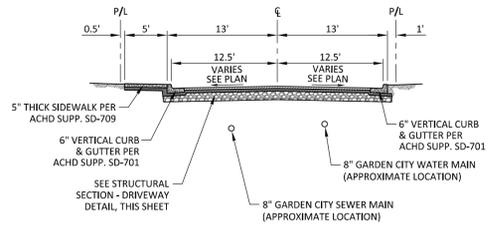
AGENCY REVIEW NOT APPROVED FOR CONSTRUCTION

AGENCY REVIEW NOT APPROVED FOR CONSTRUCTION

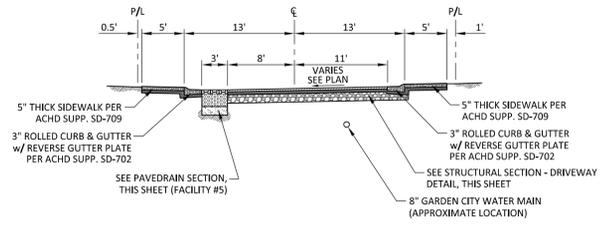
SHEET NO. **6**

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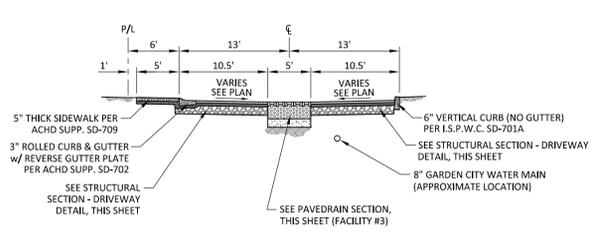
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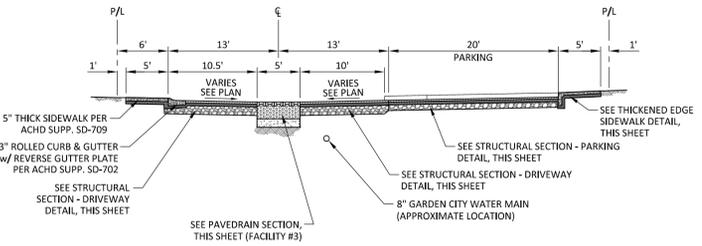
SECTION C - C
DRIVE AISLE A
 1" = 10"



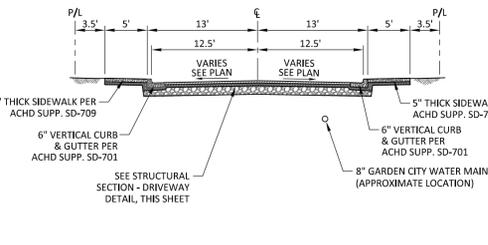
SECTION D - D
DRIVE AISLE A
 1" = 10"



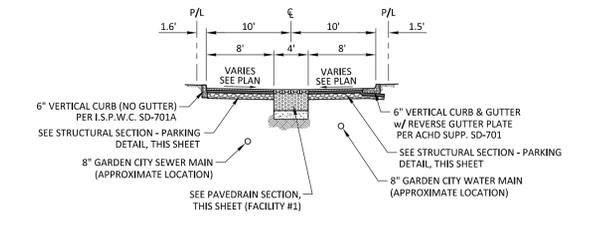
SECTION E - E
DRIVE AISLE B
 1" = 10"



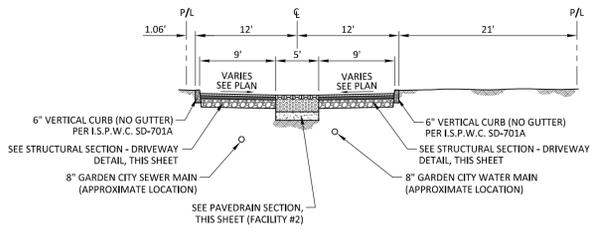
SECTION F - F
DRIVE AISLE B
 1" = 10"



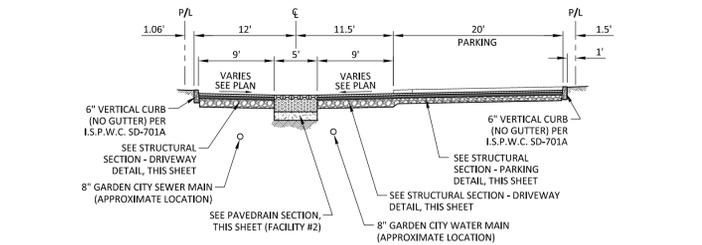
SECTION G - G
DRIVE AISLE B
 1" = 10"



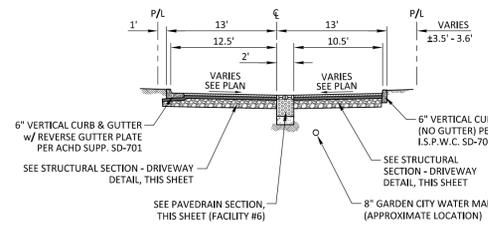
SECTION H - H
DRIVE AISLE C
 1" = 10"



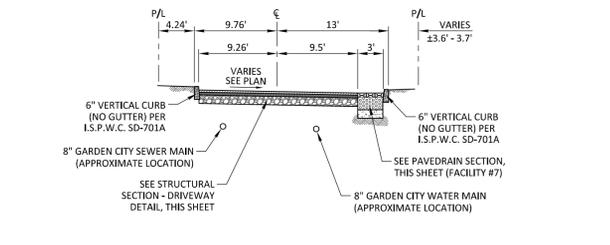
SECTION I - I
DRIVE AISLE C
 1" = 10"



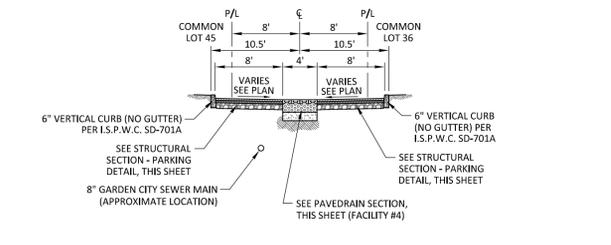
SECTION J - J
DRIVE AISLE C
 1" = 10"



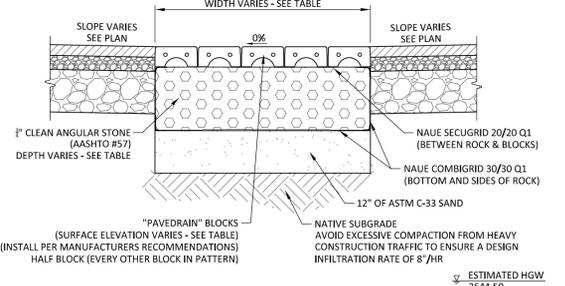
SECTION K - K
DRIVE AISLE D
 1" = 10"



SECTION L - L
DRIVE AISLE D
 1" = 10"



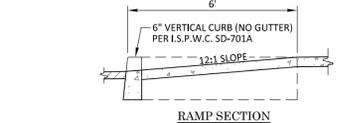
SECTION M - M
ALLEY
 1" = 10"



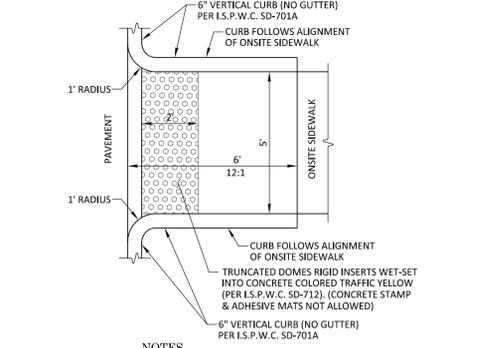
DRAINAGE FACILITY TABLE

DRAINAGE FACILITY #	LENGTH (FT.)	WIDTH (FT.)	ROCK DEPTH (FT.)	TOP PAVEDRAIN ELEVATION	ESTIMATED HIGH GROUNDWATER
1	140	4	2	2650.00	2644.50
2	140	5	1.5	2650.00	2644.50
3	130	5	1.5	2650.00	2644.50
4	167	4	1	2650.00	2644.50
5	130	3	1.5	2650.00	2644.50
6	100	2	2	2650.00	2644.50
7	118	3	1.5	2650.00	2644.50

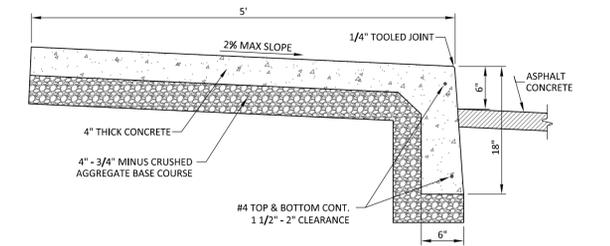
PAVEDRAIN SECTION
 -NTS-



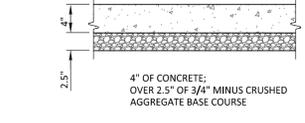
RAMP SECTION



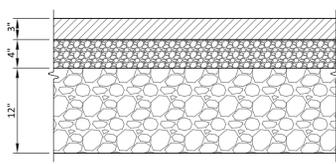
PEDESTRIAN RAMP DETAIL
 -NTS-



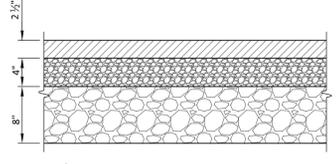
THICKENED EDGE SIDEWALK DETAIL
 -NTS-



ONSITE SIDEWALK / PATIO SECTION
 (UNLESS OTHERWISE SPECIFIED)
 -NTS-



STRUCTURAL SECTION - DRIVEWAY
 (TRUCK ACCESS)
 -NTS-



STRUCTURAL SECTION - PARKING
 (NO TRUCK ACCESS)
 -NTS-

- NOTES**
1. SIDEWALKS PER I.S.P.W.C. SD-709.
 2. SEE BUILDING PLANS FOR GARAGE SLAB THICKNESS.
 3. ALL SIDEWALKS SHALL SLOPE TO DRAIN (AWAY FROM STRUCTURES) @ 1.0% MIN.
 4. CREATE TOOLED OR SAWCUT JOINTS FOR CRACK RELIEF AT 4'-6" SPACING (TYPICAL).

- NOTES**
1. PAVEMENT THICKNESS RECOMMENDATION IS ADOPTED FROM THE GEOTECHNICAL ENGINEERING REPORT OF THE TRAILWINDS DEVELOPMENT, MTI FILE NUMBER B1400865, STAMPED DATE JANUARY 31, 2014.

KEYNOTES

- 1 CONSTRUCT 6" VERTICAL CURB & GUTTER w/REVERSE GUTTER PLATE (SEE GRADING NOTES)
- 2 CONSTRUCT PEDESTRIAN RAMP (PER I.S.P.W.C. SD-712G) w/TRUNCATED DOMES RIGID INSERTS WET-SET INTO CONCRETE COLORED TRAFFIC YELLOW (PER SD-712). (CONCRETE STAMP & ADHESIVE MATS NOT ALLOWED). CONTRACTOR TO VERIFY CROSS SLOPE, NOT TO EXCEED 1.75% ±0.25% (NO TOLERANCES ALLOWED)
- 3 CONSTRUCT PEDESTRIAN RAMP (PER I.S.P.W.C. SD-712C) w/TRUNCATED DOMES RIGID INSERTS WET-SET INTO CONCRETE COLORED TRAFFIC YELLOW (PER SD-712). (CONCRETE STAMP & ADHESIVE MATS NOT ALLOWED). CONTRACTOR TO VERIFY CROSS SLOPE, NOT TO EXCEED 1.75% ±0.25% (NO TOLERANCES ALLOWED)
- 4 CONSTRUCT CONCRETE SIDEWALK (TYP). (PER ACHD SUPP. SD-709)
- 5 4" TRANSITION FROM 6" VERTICAL CURB TO 3" ROLLED CURB
- 6 CONSTRUCT 3" ROLLED CURB & GUTTER w/REVERSE GUTTER PLATE (SEE GRADING NOTES)
- 7 INSTALL "PAVEDRAIN" BLOCKS PER PAVEDRAIN SECTION ON SHEET C5
- 8 CONSTRUCT 6" VERTICAL CURB, NO GUTTER (TYP). (PER I.S.P.W.C. SD-701A)
- 9 CONSTRUCT ONSITE SIDEWALK PER DETAIL ON SHEET C5
- 10 CONSTRUCT THICKENED EDGE SIDEWALK PER DETAIL ON SHEET C5, OR CONTRACTOR MAY POUR SIDEWALK AGAINST I.S.P.W.C. SD-701A VERTICAL CURB AT OWNER'S DISCRETION
- 11 CONSTRUCT PEDESTRIAN RAMP PER DETAIL ON SHEET C5
- 12 CONSTRUCT 6" VERTICAL CURB & GUTTER (PER ACHD SUPP. SD-701)
- 13 4" TRANSITION FROM REVERSE GUTTER PLATE TO STANDARD GUTTER PLATE
- 14 TRUCK ACCESS PAVEMENT SECTION (SEE STRUCTURAL SECTION - DRIVEWAY DETAIL ON SHEET C5)
- 15 PARKING PAVEMENT SECTION (SEE STRUCTURAL SECTION - PARKING DETAIL ON SHEET C5)
- 16 TRANSITION FROM STRUCTURAL SECTION - DRIVEWAY TO STRUCTURAL SECTION - PARKING
- 17 CONTRACTOR TO COORDINATE WITH OWNERS TO INSTALL NEW WROUGHT IRON FENCE
- 18 STAINED/STAMPED CONCRETE. COLOR AND PATTERN AS SELECTED

GRADING NOTES

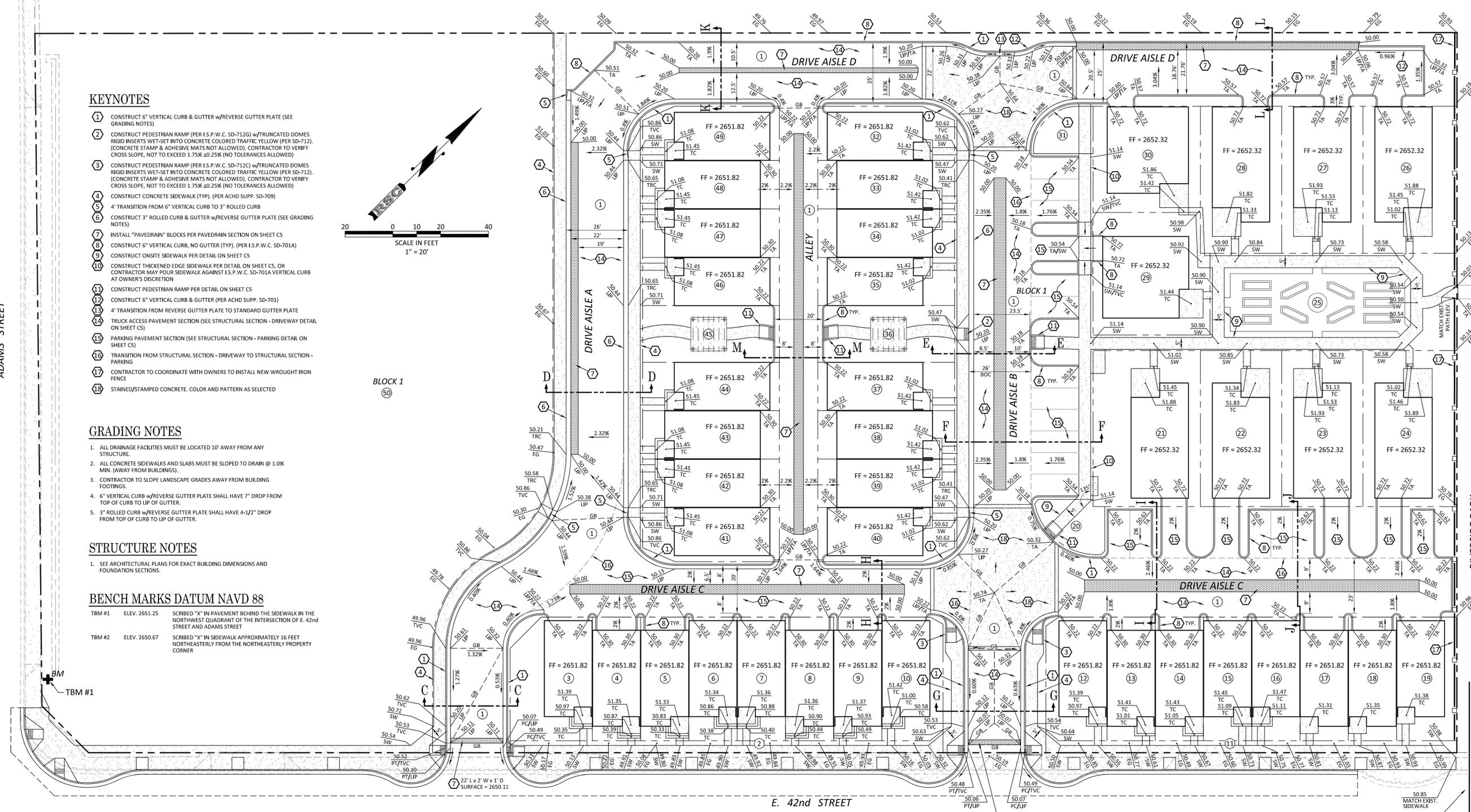
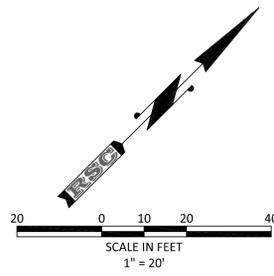
1. ALL DRAINAGE FACILITIES MUST BE LOCATED 10' AWAY FROM ANY STRUCTURE.
2. ALL CONCRETE SIDEWALKS AND SLABS MUST BE SLOPED TO DRAIN @ 1.0% MIN. AWAY FROM BUILDINGS.
3. CONTRACTOR TO SLOPE LANDSCAPE GRADES AWAY FROM BUILDING FOOTINGS.
4. 6" VERTICAL CURB w/REVERSE GUTTER PLATE SHALL HAVE 7" DROP FROM TOP OF CURB TO LIP OF GUTTER.
5. 3" ROLLED CURB w/REVERSE GUTTER PLATE SHALL HAVE 4-1/2" DROP FROM TOP OF CURB TO LIP OF GUTTER.

STRUCTURE NOTES

1. SEE ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSIONS AND FOUNDATION SECTIONS.

BENCH MARKS DATUM NAVD 88

- TBM #1 ELEV. 2651.25 SCRIBED "X" IN PAVEMENT BEHIND THE SIDEWALK IN THE NORTHWEST QUADRANT OF THE INTERSECTION OF E. 42nd STREET AND ADAMS STREET
- TBM #2 ELEV. 2650.67 SCRIBED "X" IN SIDEWALK APPROXIMATELY 16 FEET NORTHEASTERLY FROM THE NORTHEASTERLY PROPERTY CORNER



SEE SHEET C3 FOR GRADING ON E. 42nd STREET

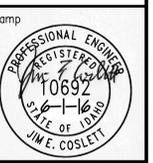
AGENCY REVIEW NOT APPROVED FOR CONSTRUCTION

HUTCHISON SMITH ARCHITECTS



PROJECT: RSC 16-14
 FILE: Parkway GD.dwg
 DATE: June 1, 2016
 DRAWN: JDF
 REVISIONS:

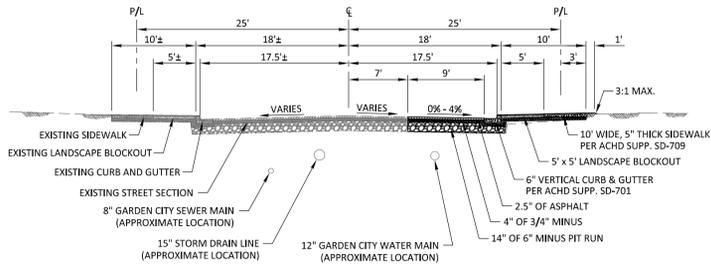
ROCK SOLID CIVIL
 Civil Engineering and Land Development Consulting
 270 North 27th Street, Boise, ID 83702
 Office Phone: 208.342.3277
 www.rocksolidcivil.com



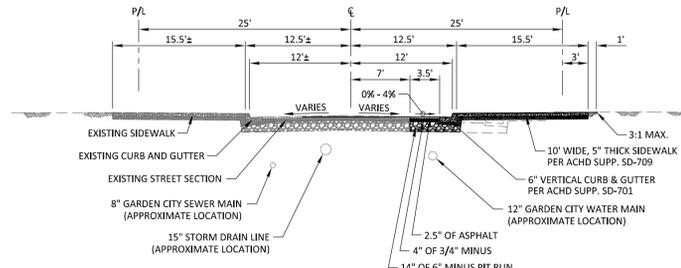
MIXED USE RESIDENTIAL
 PARKWAY STATION
 E 42nd ST
 GRADING & DRAINAGE PLAN

SHEET NO.
C4

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SECTION A-A
EAST 42nd STREET
-NTS-



SECTION B-B
EAST 42nd STREET
-NTS-

KEYNOTES

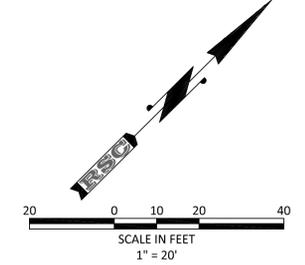
- 1 SAW CUT MIN. 3" INTO EXISTING PAVEMENT (REPAIR PER ACHD SUPP. SD-303 & SD-806) (SEE PAVEMENT REPAIR NOTES, THIS SHEET)
- 2 COORDINATE TO REMOVE EXISTING CURB, GUTTER AND SIDEWALK (TYP.)
- 3 MATCH EXISTING CURB, GUTTER & SIDEWALK
- 4 CONSTRUCT CONCRETE TRANSITION FROM 10' WIDE SIDEWALK TO EXISTING SIDEWALK
- 5 CONSTRUCT 6" VERTICAL CURB & GUTTER (PER ACHD SUPP. SD-701)
- 6 CONSTRUCT 10' WIDE CONCRETE SIDEWALK. (PER ACHD SUPP. SD-709)
- 7 CONSTRUCT PEDESTRIAN RAMP (PER I.S.P.W.C. SD-712A) w/TRUNCATED DOMES RIGID INSERTS WET-SET INTO CONCRETE COLORED TRAFFIC YELLOW (PER SD-712). (CONCRETE STAMP & ADHESIVE MATS NOT ALLOWED). CONTRACTOR TO VERIFY CROSS SLOPE, NOT TO EXCEED 1.75% ±0.25% (NO TOLERANCES ALLOWED)
- 8 5' x 5' LANDSCAPE BLOCKOUT IN SIDEWALK (TYP.)
- 9 INSTALL TYPE I INLET CATCH BASIN (PER ACHD SUPP. SD-601)
- 10 INSTALL 12" LF OF 12" C-909 PVC STORM DRAIN PIPE @ 0.5%
- 11 INSTALL 188 LF OF 12" C-909 PVC STORM DRAIN PIPE @ 0.5%
- 12 CONSTRUCT PEDESTRIAN RAMP (PER I.S.P.W.C. SD-712C) w/TRUNCATED DOMES RIGID INSERTS WET-SET INTO CONCRETE COLORED TRAFFIC YELLOW (PER SD-712). (CONCRETE STAMP & ADHESIVE MATS NOT ALLOWED). CONTRACTOR TO VERIFY CROSS SLOPE, NOT TO EXCEED 1.75% ±0.25% (NO TOLERANCES ALLOWED)
- 13 APPROXIMATE LOCATION OF NEW LIGHT POLE (SEE ELECTRICAL PLANS)
- 14 RETAIN AND PROTECT EXISTING CURB, GUTTER AND SIDEWALK
- 15 REMOVE EXISTING SIDEWALK
- 16 MATCH EXISTING SIDEWALK
- 17 COORDINATE TO RELOCATE AND/OR ADJUST CROSSWALK SIGN AND VAULT TO GRADE
- 18 COORDINATE TO RELOCATE TRAFFIC SIGN
- 19 COORDINATE TO RELOCATE UTILITY POLE
- 20 COORDINATE TO REMOVE OR PROTECT WATER METER
- 21 RETAIN AND PROTECT EXISTING CATCH BASIN. ADJUST FRAME & GRATE TO FINISHED GRADE
- 22 COORDINATE TO REMOVE EXISTING UTILITY
- 23 COORDINATE TO REMOVE TREE
- 24 COORDINATE TO RELOCATE FIRE HYDRANT TO BACK OF SIDEWALK
- 25 COORDINATE TO CAP SEWER STUB
- 26 COORDINATE TO REMOVE MAIL KIOSK
- 27 NEW 1" WATER SERVICE CROSSING (SEE SHEET C6). SLEEVE CROSSINGS UNDER NEW STORM DRAIN LINE PER KEYNOTE 17 ON SHEET C6.

ACHD PAVEMENT REPAIR NOTES

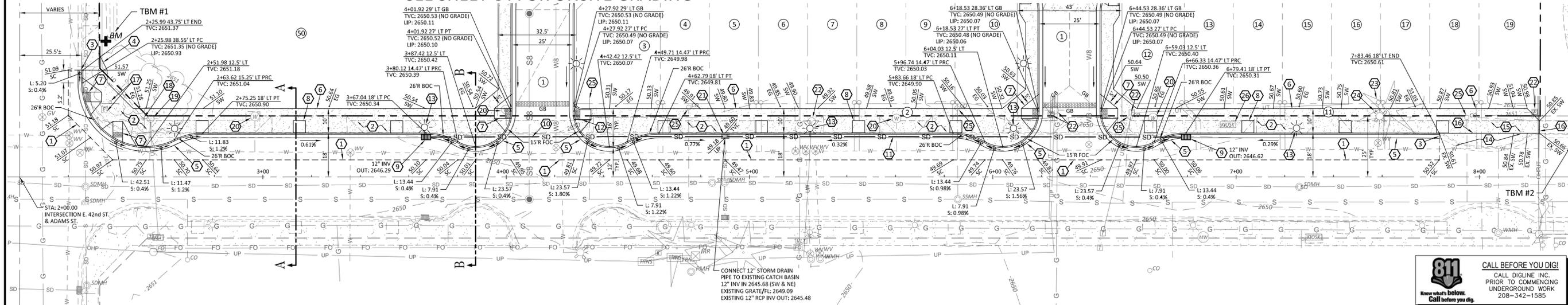
- ACTUAL FIELD CONDITIONS DURING TRENCHING MAY REQUIRE ADDITIONAL PAVEMENT REPAIR BEYOND THE LIMITS SHOWN ON THE PLANS. THE FOLLOWING CONDITIONS ARE LISTED IN SECTION 6000 OF ACHD POLICY MANUAL. ALSO REFERENCE I.S.P.W.C. SD-301; ACHD SUPP. DWG SD-303; & ACHD SUPP. DWG SD-806.
1. ALL ASPHALT MATCH LINES FOR PAVEMENT REPAIR SHALL BE PARALLEL TO THE CENTERLINE OF THE STREET AND INCLUDE ANY AREA DAMAGED BY EQUIPMENT DURING TRENCHING OPERATIONS.
 2. IF THE CUMULATIVE DAMAGED PAVEMENT AREA EXCEEDS 50% OF THE TOTAL ROAD SURFACE, CONTRACTOR SHALL REPLACE THE ENTIRE ROADWAY SURFACE.
 3. CONTRACTOR SHALL REPLACE THE PAVEMENT SURFACE TO ENSURE MATCH LINE DOES NOT FALL WITHIN THE WHEEL PATH OF A LANE. MATCH LINE SHALL ONLY FALL IN THE CENTER OR EDGE OF A TRAVEL LANE.
 4. FLOWABLE FILL OR IMPORTED MATERIAL MAY BE REQUIRED IF THE NATIVE TRENCH MATERIAL IS DEEMED UNSUITABLE BY ACHD INSPECTOR, DOES NOT MEET COMPACTION STANDARDS OR TIME IS A CRITICAL FACTOR.
 5. ANY EXCEPTIONS TO THESE RULES SHALL BE PRE-APPROVED IN WRITING BY THE DISTRICT STAFF BEFORE CONSTRUCTION BEGINS.
 6. MATCH EXIST. STREET/DRIVEWAY SECTION OR USE THE FOLLOWING: 2.5" OF ASPHALT OVER 4" OF 3/4" MINUS CRUSHED AGGREGATE OVER 14" OF 6" MINUS PIT RUN. WHICHEVER SECTION IS GREATER MUST BE USED.

BENCH MARKS DATUM NAVD 88

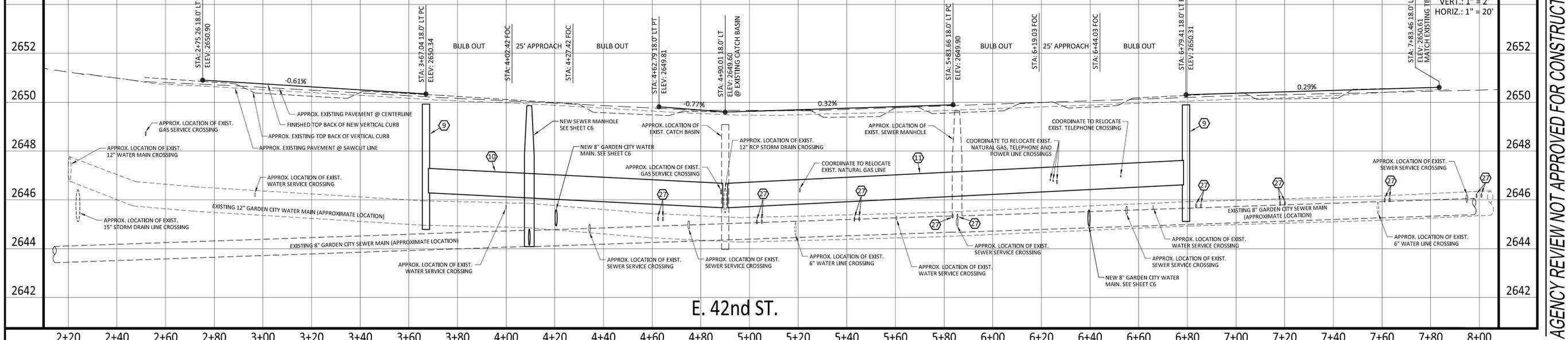
TBM #1	ELEV. 2651.25	SCRIBED "X" IN PAVEMENT BEHIND THE SIDEWALK IN THE NORTHWEST QUADRANT OF THE INTERSECTION OF E. 42nd STREET AND ADAMS STREET
TBM #2	ELEV. 2650.67	SCRIBED "X" IN SIDEWALK APPROXIMATELY 16 FEET NORTHEASTERLY FROM THE NORTHEASTERLY PROPERTY CORNER



SEE SHEET C4 FOR ONSITE GRADING



SEE SHEET C6 FOR UTILITY PLAN



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UNDERGROUND WORK
208-342-1585

HUTCHISON SMITH ARCHITECTS
270 North 27th St. Boise, Idaho 83702
(208) 338-1212
fax (208) 338-0011

PROJECT: RSC 16-14
FILE: Parkway HCDwg
DATE: June 1, 2016
DRAWN: JDF
REVISIONS:

ROCK SOLID CIVIL
Civil Engineering and Land Development Consulting
270 North 27th Street, Boise, ID 83702
Office Phone: 208-342-3277
www.rocksolidcivil.com

Stamp: PROFESSIONAL ENGINEER
REGISTERED No. 10692
STATE OF IDAHO
JIM E. COSLETT

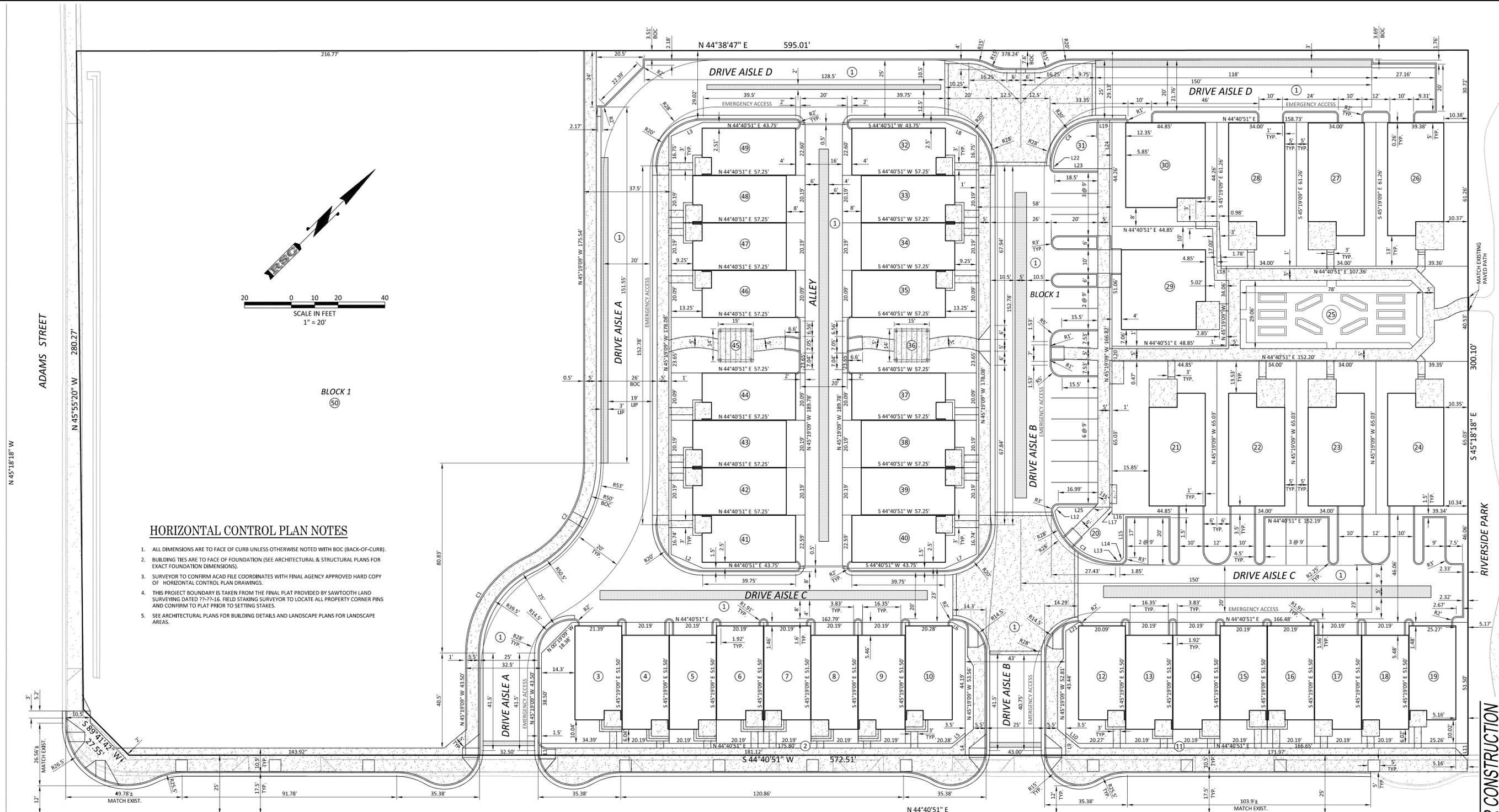
AGENCY REVIEW NOT APPROVED FOR CONSTRUCTION

MIXED USE RESIDENTIAL
PARKWAY STATION
E 42nd ST

ACHD FRONTAGE PLAN/PROFILE

GARDEN CITY, ID.

SHEET NO. **C3**



HORIZONTAL CONTROL PLAN NOTES

1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED WITH BOC (BACK-OF-CURB).
2. BUILDING TIES ARE TO FACE OF FOUNDATION (SEE ARCHITECTURAL & STRUCTURAL PLANS FOR EXACT FOUNDATION DIMENSIONS).
3. SURVEYOR TO CONFIRM ACAD FILE COORDINATES WITH FINAL AGENCY APPROVED HARD COPY OF HORIZONTAL CONTROL PLAN DRAWINGS.
4. THIS PROJECT BOUNDARY IS TAKEN FROM THE FINAL PLAT PROVIDED BY SAWTOOTH LAND SURVEYING DATED 7-7-16. FIELD STAKING SURVEYOR TO LOCATE ALL PROPERTY CORNER PINS AND CONFIRM TO PLAT PRIOR TO SETTING STAKES.
5. SEE ARCHITECTURAL PLANS FOR BUILDING DETAILS AND LANDSCAPE PLANS FOR LANDSCAPE AREAS.

CURVE TABLE

CURVE	ARC LENGTH	DELTA ANGLE	RADIUS	CHORD BEARING	CHORD LENGTH
C1	30.75'	63°54'36"	45.50'	N 13°21'51" W	48.16'
C2	49.64'	63°54'36"	44.50'	N 13°21'51" W	47.10'
C3	36.29'	78°27'27"	26.50'	N 83°54'35" E	33.52'
C4	29.06'	90°00'00"	18.50'	N 00°19'09" W	26.16'

LINE TABLE

LINE	BEARING	DISTANCE	LINE	BEARING	DISTANCE
L1	N 45°19'09" W	5.00'	L14	N 40°19'09" W	2.12'
L2	N 68°06'46" E	14.71'	L15	N 45°19'09" W	18.50'
L3	N 21°14'56" E	4.85'	L16	N 44°40'51" E	4.85'
L4	N 45°19'09" W	9.37'	L17	N 45°19'09" W	3.00'
L5	N 05°18'31" E	6.89'	L18	N 44°40'51" E	4.90'
L6	N 73°33'53" E	6.08'	L19	N 44°40'51" E	6.50'
L7	N 21°14'56" E	14.71'	L20	N 45°19'09" W	6.47'
L8	N 68°06'46" E	14.71'	L21	N 10°40'00" E	6.62'
L9	N 45°19'09" W	9.37'	L22	N 45°19'09" W	1.26'
L10	N 84°05'11" E	6.89'	L23	N 44°40'51" E	24.98'
L11	N 45°18'18" W	5.00'	L24	N 45°19'09" W	19.76'
L12	N 06°05'25" W	2.32'	L25	N 44°40'51" E	22.99'
L13	N 44°40'51" E	1.85'			

HUTCHISON SMITH ARCHITECTS
 270 North 27th St. Boise, Idaho 83702
 (208) 338-1212 Fax (208) 338-0011

PROJECT: RSC 16-14
 FILE: Parkway HCDwg
 DATE: June 1, 2016
 DRAWN: JDF
 REVISIONS:

ROCK SOLID CIVIL
 Civil Engineering and Land Development Consulting
 270 North 27th Street, Boise, ID 83702
 Office Phone: 208-342-3277
 www.rocksolidcivil.com



MIXED USE RESIDENTIAL PARKWAY STATION
 E 42nd St
HORIZONTAL CONTROL PLAN

GARDEN CITY, ID.
 SHEET NO. **C2**

AGENCY REVIEW NOT APPROVED FOR CONSTRUCTION

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DEVELOPMENT PLANS PARKWAY STATION

A RESUBDIVISION OF LOTS 1-6, BLOCK 17 OF FAIRVIEW ACRES SUBDIVISION NO. 3
SITUATED IN THE SE 1/4 OF THE SW 1/4 OF SECTION 32
T.4N., R.2E., B.M., CITY OF GARDEN CITY, ADA COUNTY, IDAHO
2016



VICINITY MAP
1" = 1000'

SHEET INDEX

- C1. COVER SHEET, INDEX & NOTES
- C2. HORIZONTAL CONTROL PLAN
- C3. ACHD FRONTAGE PLAN / PROFILE
- C4. ONSITE GRADING & DRAINAGE PLAN
- C5. DRAINAGE DETAILS
- C6. UTILITY PLAN
- C7. UTILITY PROFILES
- ESC1 (SWPPP)

GENERAL

- COMPLIANCE WITH THE ENVIRONMENTAL PROTECTION AGENCY (EPA) REQUIREMENTS FOR PROTECTION FROM EROSION BY STORM WATER IS REQUIRED FOR THIS PROJECT. A RESPONSIBLE PARTY (RP) SHALL BE RESPONSIBLE TO COMPLY WITH THE EPA REQUIREMENTS. IF THE OWNER HAS NOT DESIGNATED A RP, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE A RP. THE RP IS REQUIRED TO PREPARE, FILE AND COMPLY WITH THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR THIS PROJECT. THE RP IS RESPONSIBLE TO FILE A NOTICE OF INTENT (NOI) TO CONSTRUCT WITH EPA. EPA MUST OFFICIALLY ACCEPT THE NOI PRIOR TO BEGINNING ANY SITE DISTURBANCE ACTIVITIES. THE SWPPP IS A DOCUMENT/PLAN THAT IS REQUIRED TO BE UPDATED AND AMENDED TO BEST FIT THE SITE AS CONSTRUCTION OCCURS. THE RP IS RESPONSIBLE TO KEEP THE PLAN CURRENT. AT COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND AFTER THE PROJECT SITE IS STABILIZED FOR EROSION CONTROL, THE RP IS REQUIRED TO PREPARE AND SUBMIT A NOTICE OF TERMINATION OF THE SWPPP WITH EPA.
- ALL CONSTRUCTION, MATERIALS, APPURTENANCES AND TESTING SHALL COMPLY WITH THE REQUIREMENTS OF THE 2015 EDITION OF THE IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ISPCW), UNLESS SPECIFICALLY MODIFIED BY THESE CONSTRUCTION DOCUMENTS.
- THE CONTRACTOR, ALL APPLICABLE SUB-CONTRACTORS, DEVELOPER/OWNER, UTILITY COMPANY REPRESENTATIVES, A GARDEN CITY DEPARTMENT OF PUBLIC WORKS REPRESENTATIVE AND AN ADA COUNTY HIGHWAY DISTRICT REPRESENTATIVE SHALL ATTEND A PRE-CONSTRUCTION CONFERENCE PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- THE CONTRACTOR SHALL OBTAIN A CONSTRUCTION PERMIT FROM THE ADA COUNTY HIGHWAY DISTRICT AT LEAST 24 HOURS PRIOR TO COMMENCING CONSTRUCTION OF ANY OF THE IMPROVEMENTS SHOWN HEREON LOCATED WITHIN PUBLIC RIGHT-OF-WAY.
- CONSTRUCTION INSPECTION SHALL BE PERFORMED BY THE PROJECT ENGINEER, THE ADA COUNTY HIGHWAY DISTRICT AND/OR THE GARDEN CITY DEPARTMENT OF PUBLIC WORKS. INSPECTION BY THE GARDEN CITY DEPARTMENT OF PUBLIC WORKS WILL BE FOR DEPARTMENT PURPOSES ONLY TO SPOT CHECK WORK COMPLIANCE WITH THE CITY'S REQUIREMENTS. IT IS THE PROJECT ENGINEER'S RESPONSIBILITY TO ASSURE COMPLIANCE WITH THE PROJECT PLANS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL VERIFY SITE CONDITIONS AND DIMENSIONS PRIOR TO BEGINNING WORK. ANY DEVIATIONS, OMISSIONS OR ERRORS SHALL BE PRESENTED TO THE PROJECT ENGINEER FOR RESOLUTION. ANY CHANGES TO THE PLANS AND SPECIFICATIONS SHALL BE SUBMITTED TO AND APPROVED BY THE GARDEN CITY DEPARTMENT OF PUBLIC WORKS PRIOR TO IMPLEMENTATION OF THE CHANGE. SAID CHANGE MAY ALSO NEED TO BE SUBMITTED TO THE IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY FOR APPROVAL.
- THE CONTRACTOR SHALL CONTACT DIGLINE (811) AND OTHER APPROPRIATE UTILITY PROVIDERS FOR UTILITY LOCATIONS AT LEAST 72 HOURS PRIOR TO BEGINNING ANY EXCAVATION.
- ANY WATERS CREATED BY DEWATERING SHALL NOT BE PERMITTED TO DIRECTLY DISCHARGE TO ANY EXISTING SURFACE WATER FACILITY. PRIOR TO DISCHARGING TO WATERS OF THE STATE OF IDAHO, THE CONTRACTOR SHALL SECURE A SHORT-TERM ACTIVITY EXEMPTION FROM THE APPLICABLE REGIONAL OFFICE OF THE IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY.
- HORIZONTAL AND VERTICAL SEPARATION OF POTABLE AND NON-POTABLE PIPELINES SHALL MEET THE REQUIREMENTS OF ISPCW SECTION 405 AND ISPCW DRAWING NO. 407.
- ALL LOT, BLOCK, STREET RIGHT-OF-WAY, AND EASEMENT DIMENSIONS SHALL BE TAKEN FROM THE PLAT OF PARKWAY STATION.
- THE CONTRACTOR SHALL REMOVE ALL OBSTRUCTIONS, BOTH ABOVE AND BELOW GROUND, AS REQUIRED FOR THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS. THIS SHALL INCLUDE CLEARING AND GRUBBING WHICH CONSISTS OF CLEARING THE GROUND SURFACE OF ALL TREES, STUMPS, BRUSH, UNDERGROWTH, HEDGES, HEAVY GROWTH OF GRASS OR WEEDS, FENCES, STRUCTURES, DEBRIS, RUBBER, AND SUCH MATERIAL WHICH, IN THE OPINION OF THE ENGINEER, IS UNSUITABLE FOR THE FOUNDATION OF PAVEMENTS. ALL MATERIAL NOT SUITABLE FOR FUTURE USE ON SITE SHALL BE DISPOSED OF OFF-SITE.
- SURVEY CONTROL POINTS WHICH ARE CRITICAL TO THE CONSTRUCTION OF THE PROJECT ARE LOCATED WITHIN THE LIMITS OF WORK. THE CONTRACTOR SHALL TAKE PRECAUTION TO PROTECT THE POINTS IN PLACE.
- THE CONTRACTOR SHALL MAINTAIN ALL EXISTING DRAINAGE FACILITIES WITHIN THE CONSTRUCTION AREA UNTIL THE DRAINAGE IMPROVEMENTS ARE IN PLACE AND FUNCTIONING.
- ALL CONTRACTORS WORKING WITHIN THE PROJECT BOUNDARIES ARE RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE SAFETY LAWS OF ANY JURISDICTIONAL BODY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL BARRICADES, SAFETY DEVICES AND CONTROL OF TRAFFIC WITHIN AND AROUND THE CONSTRUCTION AREA.
- ALL MATERIALS FURNISHED ON OR FOR THE PROJECT MUST MEET THE MINIMUM REQUIREMENTS OF THE APPROVING AGENCIES OR AS SET FORTH HEREIN, WHICHEVER IS MORE RESTRICTIVE.
- CONTRACTORS MUST FURNISH PROOF THAT ALL MATERIALS INSTALLED ON THIS PROJECT MEET THE REQUIREMENTS OF ITEM #16 AT THE REQUEST OF THE AGENCY AND/OR THE ENGINEER.
- THE CONTRACTOR IS TO FIELD VERIFY ALL EXISTING PAVEMENTS, CURB AND GUTTER, STORM DRAIN, CHANNEL CROSSINGS, AND SEWER ELEVATIONS OR INVERTS PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER WHEN ELEVATIONS OR INVERTS DO NOT MATCH PLANS.
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND SHALL IMMEDIATELY NOTIFY ENGINEER OF ANY CONFLICTS NOT SHOWN ON PLANS. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCURRED BY FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. CALL DIG LINE 1-800-842-5585.
- ALL UTILITIES INCLUDING SERVICE LINES WITHIN THE STREET TRAVEL WAY SHALL BE IN PLACE PRIOR TO CURB, GUTTER, SIDEWALKS AND STREET CONSTRUCTION.
- THE CONTRACTOR SHALL REPLACE ALL PAVEMENT AND CONCRETE REMOVED FOR THE INSTALLATION OF WATER, SEWER OR IRRIGATION PIPE. ALL PAVEMENT SHALL BE REPLACED WITHIN SEVEN CALENDAR DAYS FROM THE TIME THE PAVEMENT AND/OR CONCRETE IS REMOVED. CONCRETE AND PAVEMENT SHALL BE REPLACED PER ISPCW STANDARDS.
- NO PAVING SHALL OCCUR UNTIL THE CONTRACTOR OBTAINS WRITTEN APPROVAL OF ALL INSTALLED WATER AND SEWER FACILITIES FROM THE CITY OF GARDEN CITY.
- CONTRACTOR SHALL RETAIN ON SITE AT ALL TIMES A COPY OF THE GEOTECHNICAL REPORT BY MTI (81512996) DATED DECEMBER 2, 2015.

ROADWAY

- ALL CONSTRUCTION IN THE PUBLIC RIGHT-OF-WAY SHALL CONFORM TO THE CURRENT EDITION OF THE ISPCW AND THE ACHD SUPPLEMENTAL SPECIFICATIONS. NO EXCEPTIONS TO DISTRICT POLICY, STANDARDS, AND THE ISPCW WILL BE ALLOWED UNLESS SPECIFICALLY AND PREVIOUSLY APPROVED IN WRITING BY THE DISTRICT.
- WHEN DISCREPANCIES OCCUR BETWEEN PLANS AND SPECIFICATIONS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER. UNTIMELY NOTIFICATION SHALL NEGATE ANY CONTRACTORS CLAIM FOR ADDITIONAL COMPENSATION.
- ALL CONTRACTORS WORKING WITHIN THE PUBLIC ROAD RIGHT-OF-WAY ARE REQUIRED TO SECURE A RIGHT-OF-WAY PERMIT FROM ACHD AT LEAST 24 HOURS PRIOR TO ANY CONSTRUCTION.
- INSPECTION OF WORK WITHIN THE RIGHT-OF-WAYS SHALL BE BY THE ADA COUNTY HIGHWAY DISTRICT AND THE OWNER'S ENGINEER. CONTACT ACHD "ZONE" INSPECTION STAFF AT 387-6280.
- ALL STORM DRAINAGE APPURTENANCES SHALL BE INSPECTED BY ADA COUNTY HIGHWAY DISTRICT (R/W ONLY), AND THE OWNERS ENGINEER.
- ALL ONSITE PRIVATE DRIVES SHALL CONFORM TO THE CURRENT EDITION OF THE ISPCW. NO EXCEPTIONS TO THE ISPCW WILL BE ALLOWED UNLESS SPECIFICALLY AND PREVIOUSLY APPROVED IN WRITING BY THE DESIGN ENGINEER AND/OR GARDEN CITY PUBLIC WORKS.
- CONTACT THE DESIGN ENGINEER FOR CONSTRUCTION OBSERVATION OF ALL ONSITE PRIVATE DRIVES. THE CITY MAY STILL OBSERVE THE PRIVATE DRIVE CONSTRUCTION, BUT THE DESIGN ENGINEER IS PRIMARILY RESPONSIBLE FOR PLAN CONFORMANCE ON ONSITE PRIVATE DRIVES.
- TESTING RESULTS OF ONSITE PRIVATE DRIVES SHALL BE REVIEWED FOR COMPLIANCE BY THE OWNER'S ENGINEER.
- ALL COSTS OF RETESTING FOR PREVIOUSLY FAILED TESTS SHALL BE BACKCHARGED TO THE CONTRACTOR BY THE OWNER.
- ALL COSTS TO THE CONTRACTOR INCURRED IN CORRECTING DEFICIENT WORK SHALL BE TO THE CONTRACTOR'S ACCOUNT. FAILURE TO CORRECT SUCH WORK WILL BE CAUSE FOR A STOP WORK ORDER AND POSSIBLE TERMINATION.
- EXISTING A C PAVEMENT SHALL BE CUT TO A NEAT STRAIGHT LINE PARALLEL OR PERPENDICULAR TO THE STREET CENTERLINE AND THE EXPOSED EDGE SHALL BE TACKED WITH EMULSION PRIOR TO PAVING.
- MANHOLE GRADE RINGS, CAST IRON RINGS AND COVERS SHALL BE PROVIDED BY THE SEWER CONTRACTOR. THE ROAD CONTRACTOR SHALL INSTALL THE SEWER GRADE RINGS, CAST IRON RINGS, COVERS AND CONCRETE COLLARS TO FINISH GRADE. WATER VALVE BOXES AND COVERS SHALL BE PROVIDED BY THE WATER CONTRACTOR. THE ROAD CONTRACTOR SHALL INSTALL THE WATER VALVE BOXES COVERS AND CONCRETE COLLARS TO FINISH GRADE.
- ALL TOPS OF VALVE BOXES AND SEWER MANHOLES SHALL BE SET FLUSH WITH THE SLOPE OF THE FINISHED STREET GRADES. THE ROADWAY CONTRACTOR SHALL INSTALL AND ADJUST ALL SPACERS, GRADE RINGS, MANHOLE RINGS AND LIDS.
- ALL WATER VALVES WILL BE PLACED SO AS NOT TO CONFLICT WITH ANY CONCRETE CURB, GUTTER, VALLEY GUTTER, AND SIDEWALK IMPROVEMENTS.
- ALL WATER METERS ARE TO BE LOCATED OUTSIDE THE ROAD RIGHT-OF-WAY. THERE MUST BE AT LEAST A ONE (1) FOOT SEPARATION BETWEEN BACK OF SIDEWALK (OR CURB IF NO SIDEWALK) AND THE LEADING EDGE OF ANY FIRE HYDRANT.
- OVER EXCAVATION AND ADDITIONAL GRANULAR BACKFILL MAY BE REQUIRED IN HIGH GROUND/WATER AREAS WHICH ARE TO BE DETERMINED BY THE FIELD INSPECTOR.
- ALL MATERIALS PLACED WITHIN THE PUBLIC RIGHT-OF-WAY AS FILL OR BACKFILL SHALL BE PLACED AND COMPACTED IN ACCORDANCE WITH SECTION 306 OF THE CURRENT EDITION OF ADA COUNTY HIGHWAY DISTRICT STANDARD SPECIFICATIONS.
- CLEARING AND GRUBBING AND REMOVAL OF OBSTRUCTIONS SHALL BE IN ACCORDANCE WITH ISPCW SECTION 201.
- EXCAVATION AND EMBANKMENT SHALL BE IN ACCORDANCE WITH ISPCW SECTION 202.
- STRUCTURAL EXCAVATION AND COMPACTING BACKFILL SHALL BE IN ACCORDANCE WITH ISPCW SECTION 204.
- DEWATERING SHALL BE IN ACCORDANCE WITH ISPCW SECTION 205.
- PERMANENT EROSION CONTROL SHALL BE IN ACCORDANCE WITH ISPCW SECTION 206.
- PERMANENT STORMWATER BEST MANAGEMENT PRACTICES SHALL BE IN ACCORDANCE WITH ISPCW SECTION 207.
- UNCRUSHED AGGREGATE (6-INCH MINUS) SHALL BE PER ISPCW SECTION 801.
- CRUSHED AGGREGATE BASE 4-INCH (TYPE II) SHALL BE PER ISPCW SECTION 802.
- DRAINAGE GEOTEXTILE (TYPE I) SHALL BE PER ISPCW SECTION 2050.
- ROADWAY CONSTRUCTION WILL MEET SPECIFIC DETAILS AND REQUIREMENTS OF THE FOLLOWING IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION STANDARD DRAWINGS (CURRENT EDITION) OR THE APPLICABLE ACHD SUPPLEMENTAL DRAWINGS (CURRENT EDITION):
 - STREET SECTION, DRAWING NO. SD-801, AND SECTIONS AS SHOWN ON TYPICAL STREET SECTIONS.
 - CONCRETE VALLEY GUTTER, DRAWING NO. SD-708
 - VERTICAL CURB AND GUTTER, (ACHD SUP.DWG. SD-701)
 - PEDESTRIAN RAMP FOR HANDICAPPED, DRAWING NO. SD-712C.
 - SIDEWALKS, (ACHD SUP. DWG. SD-709)

THE ENGINEER OF RECORD CERTIFIES THAT THE PLANS ARE PREPARED IN SUBSTANTIAL CONFORMANCE WITH THE ACHD POLICY AND STANDARDS IN EFFECT AT THE TIME OF PREPARATION. THE ENGINEER ACKNOWLEDGES THAT ACHD ASSUMES NO LIABILITY FOR ERRORS OR DEFICIENCIES IN THE DESIGN. ALL VARIANCES FROM ACHD POLICY SHALL BE APPROVED IN WRITING.

SEWER

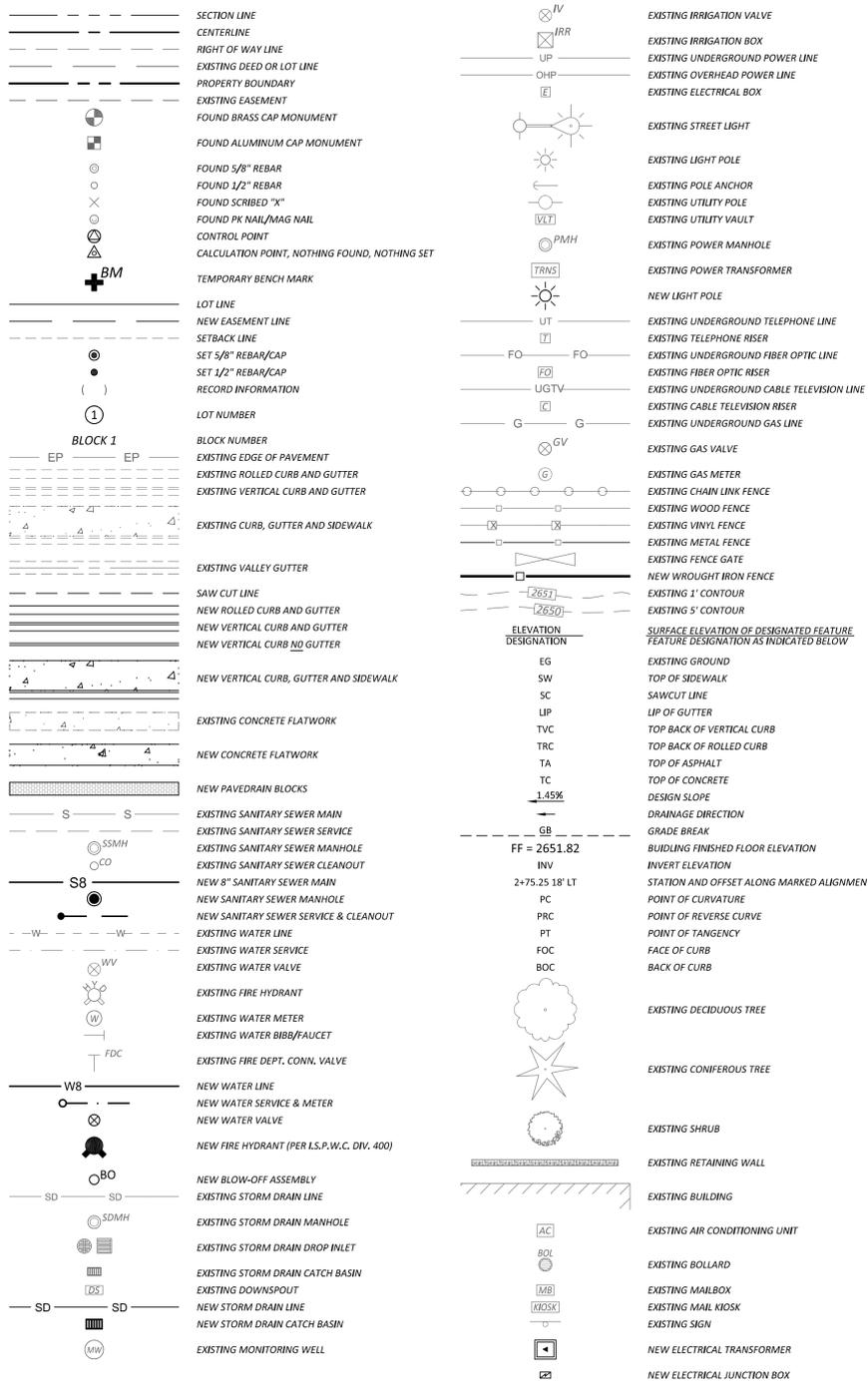
- ALL SEWER PIPE AND FITTINGS WITH COVER GREATER THAN 3 FEET, SHALL BE POLYVINYL CHLORIDE (PVC) CONFORMING TO THE REQUIREMENTS OF ASTM D-3034, SDR-35 FOR SIZES 4-INCH THROUGH 15-INCH; ASTM F-679, SDR-35, 1.1 WALL FOR SIZES 18-INCH THROUGH 24-INCH; AND ASTM D-3034, SDR-35 FOR SIZES 18-INCH THROUGH 36-INCH. THE MINIMUM COVER FOR ALL PVC SEWER LINES SHALL BE 3 FEET. SEWER PIPE AND FITTINGS WITH COVER LESS THAN 3 FEET SHALL BE DUCTILE IRON (DI) CONFORMING TO ANSI A-21.51 OR AWWA C-151, MINIMUM CLASS 50.
- SANITARY SEWER MANHOLES SHALL BE CONSTRUCTED OF REINFORCED PRECAST CONCRETE PER THE ISPCW WITH A MAXIMUM OF 12 INCHES OF CONCRETE GRADE RINGS, A 24-INCH DIAMETER CAST IRON RING AND COVER AND A CONCRETE COLLAR PER ISPCW DRAWINGS SD-501, SD-505, SD-507, SD-508, SD-509. MANHOLES SHALL NOT HAVE STEPS. THE SEWER CONTRACTOR SHALL FIELD VERIFY THAT NO MORE THAN 12-INCHES OF GRADE RINGS ARE NECESSARY TO ADJUST THE MANHOLE TO FINAL GRADE. GRADE RINGS, RING AND COVERS SHALL BE PROVIDED BY THE SEWER CONTRACTOR. MANHOLE CONES SHALL BE ECCENTRIC FOR ALL MANHOLES 4 FEET AND DEEPER. THE VERTICAL WALL OF THE CONE SHALL BE PLACED UPSTREAM AND ROTATED 45°. CONCENTRIC CONES SHALL BE USED FOR MANHOLES LESS THAN 4 FEET DEEP.
- MANUFACTURED COMPRESSION BOOTS SHALL BE USED IN MANHOLES WHERE PIPELINES ENTER AND LEAVE THE MANHOLE.
- SEWER SERVICE LINES SHALL BE ISPCW TYPE "A" OR "B" AND CONSTRUCTED AND MARKED PER ISPCW DRAWING SD-511A. SERVICES SHALL NOT BE DEEPER THAN 5 FEET AT THE PROPERTY LINE, UNLESS SPECIFICALLY APPROVED BY THE CITY. SERVICES SHALL EXTEND HORIZONTALLY 10 FEET BEYOND THE PROPERTY LINE.
- SERVICE LINES SHALL INCLUDE AN INSPECTION CLEANOUT PLACED DIRECTLY ADJACENT TO AND INSIDE PUBLIC STREET RIGHT-OF-WAY OR THE SEWER EASEMENT LINE. THE CLEANOUT SHALL CONFORM TO SD-506A & SD-506B (BOLT-DOWN COVER OPTION) WITH THE RISER BEING THE SAME SIZE AS THE SERVICE LINE.
- ALL SEWER MAINS AND SERVICES SHALL BE BEDDED PER THE REQUIREMENTS OF TYPE I BEDDING, EXCEPT THAT BEDDING MATERIAL SHALL BE SELECT 4-INCH MAXIMUM CRUSHED GRAVEL CHIPS. ALL BEDDING SHALL BE THOROUGHLY SHOVEL-SLICED UNDER THE PIPE.
- GROUNDWATER LEVELS SHALL BE MAINTAINED BELOW THE TRENCH BOTTOM AT ALL TIMES DURING CONSTRUCTION. GROUNDWATER SHALL NOT BE PERMITTED TO ENTER THE PIPELINE SYSTEM DURING CONSTRUCTION. AS SOON AS POSSIBLE THE CONTRACTOR SHALL INSTALL A REMOVABLE WATERTIGHT PLUG IN THE NEW PIPELINE AT THE POINT OF CONNECTION TO THE EXISTING SEWER SYSTEM.
- SEWERS SHALL BE CLEANED AND TESTED AFTER ALL UTILITIES ARE INSTALLED AND PRIOR TO PAVING. MATERIAL CLEANED FROM THE CONSTRUCTION SHALL NOT BE PERMITTED TO DISCHARGE TO THE DOWNSTREAM RECEIVING PIPELINE. ALL INSTALLED SEWER PIPES SHALL BE TESTED IN ACCORDANCE WITH DIVISION 500 OF THE ISPCW. A REPRESENTATIVE OF THE CITY MUST BE PRESENT MUST OBSERVE THE TESTING. MAINLINE PIPELINE TESTING SHALL INCLUDE AIR PRESSURE, DEFLECTION AND CLOSED CIRCUIT TELEVISION (CCTV) VISUAL INSPECTION. SERVICE LINE TESTING SHALL INCLUDE AIR PRESSURE AND CLOSED CIRCUIT TELEVISION (CCTV). THE CCTV REPORT SHALL BE IN THE FORM OF A VHS VIDEOTAPE OR DVD AND A WRITTEN LOG. MANHOLES SHALL BE VACUUM OR HYDROSTATICALLY TESTED FOR LEAKAGE. THE SEWER SYSTEM SHALL NOT ACCEPT ANY FLOWS UNTIL THE CITY ISSUES AN INITIAL ACCEPTANCE OF THE SYSTEM.
- THE CONTRACTOR SHALL GUARANTEE ALL WORK FOR A PERIOD OF AT LEAST A ONE-YEAR FOLLOWING THE CITY'S INITIAL ACCEPTANCE.
- THE HORIZONTAL SEPARATION OF THE WATER AND SEWER MAINS SHALL BE A MINIMUM OF TEN (10) FEET. WHERE IT IS NECESSARY FOR SEWER AND WATER TO CROSS EACH OTHER AND THE SEWER LINE IS LESS THAN 18 INCHES BELOW OR ABOVE THE WATER MAIN, THE SEWER LINE CROSSING SHALL BE P.V.C. PRESSURE PIPE CONFORMING TO AWWA C102241, FOR A DISTANCE OF 10' ON BOTH SIDES OF WATER LINE. ONE FULL LENGTH OF BOTH WATER MAIN AND SEWER LINE SHALL BE CENTERED OVER THE CROSSING POINT SO THAT ALL JOINTS WILL BE AS FAR FROM THE CROSSING AS POSSIBLE.
- FOR SEWER CONSTRUCTION ALL STATIONING RELATES TO THE SEWER CENTERLINE.
- PRIOR TO CONSTRUCTION, TEMPORARY BENCH MARKS (TBM'S) SHALL BE SET IN THE FIELD BY A LICENSED SURVEYOR OR ENGINEER AND SHALL BE FLAGGED AND CLEARLY VISIBLE FROM ALL DIRECTIONS. A TBM SHALL BE LOCATED WITHIN 100 FEET OF THE TIE-IN TO EXISTING SEWER AND SPACED NO GREATER THAN 500 FEET ALONG THE SEWER ALIGNMENT THEREAFTER. TBM'S SHALL HAVE ELEVATIONS TIED TO THE NAVD 1988 DATUM.

WATER

- ALL WATER MAINS SHALL BE POLYVINYL CHLORIDE (PVC) CONFORMING TO THE REQUIREMENTS OF AWWA C-900, CLASS 235, DR-18. ALL FITTINGS SHALL BE MECHANICAL JOINT OR FLANGED DUCTILE IRON CONFORMING TO THE REQUIREMENTS OF AWWA C-110. ALL PLASTIC PIPE SHALL BE INSTALLED WITH A #12 DIRECT BURIAL TRACER WIRE PLACED ALONG THE NORTH AND EAST SIDE OF THE MAIN. THE TRACER WIRE WILL NOT BE EXTENDED UP IN TO OR ALONG VALVE BOXES, BUT SHALL CONTINUE ALONG THE MAINLINE, UNINTERRUPTED. MINIMUM BURIAL DEPTHS FOR WATER MAINS SHALL BE 4 FEET FROM FINISH GRADE TO THE TOP OF THE PIPE.
- INDIVIDUAL WATER SERVICE CONNECTIONS SHALL BE POLYETHYLENE PIPE CONFORMING TO AWWA C-901, CLASS 200, DR-7.3. SERVICES SHALL BE CONSTRUCTED CONFORMING TO ISPCW DRAWING SD-401 OR SD-402, EXCEPT THAT THE LID SHALL CONTAIN A "TOUCH READ" HOLE, THE METER CAN SHALL BE 21-INCH DIAMETER RING AND NOTCHED AT BOTTOM FOR SERVICE LINES) AND THE CAN LID SHALL BE A D&L FOUNDRY 85200 FOR NON-TRAFFIC AREAS OR A D&L FOUNDRY 86018 FOR TRAFFIC AREAS. SERVICE PIPELINES SHALL BE A MINIMUM 1.5-INCH, UNLESS OTHERWISE NOTED, WITH MINIMUM 1.5-INCH WETER SETTERS.
- WATER VALVES SHALL BE RESILIENT-SEAT GATE VALVES CONFORMING TO AWWA C-509 OR AWWA C-515. ALL WATER VALVES SHALL BE INSTALLED WITH A STANDARD 5-1/4 INCH DIAMETER, TWO PIECE ADJUSTABLE CAST IRON VALVE BOX, TYLER/JUNION SERIES 6855, OR EQUAL. THE CAST IRON COVER SHALL BE MARKED WITH THE WORD "WATER" AS AN INTEGRAL PART OF THE COVER.
- FIRE HYDRANTS SHALL CONFORM TO AWWA C-502 AND ISPCW DRAWING SD-404. THE PUMPER NOZZLE OUTLET SHALL BE EQUIPPED WITH A "C" STORZ" ADAPTER.
- ALL WATER MAINS AND SERVICES SHALL BE BEDDED PER THE REQUIREMENTS OF TYPE I BEDDING, EXCEPT THAT BEDDING MATERIAL SHALL BE SELECT 4-INCH MAXIMUM CRUSHED GRAVEL CHIPS FOR WATER MAINS AND 3/8-INCH MAXIMUM CRUSHED GRAVEL CHIPS FOR SERVICE LINES. ALL BEDDING SHALL BE THOROUGHLY SHOVEL-SLICED UNDER THE PIPE.
- ALL INSTALLED WATER LINES SHALL BE TESTED FOR LEAKAGE IN ACCORDANCE WITH SECTION 401.3.6 OF THE ISPCW FOLLOWING INSTALLATION OF ALL UTILITIES AND PRIOR TO PAVING. EACH METER SETTER SHALL BE OPENED TO BE SURE THAT THE SERVICE CORPORATION STOP IS OPEN AND THE SERVICE IS FUNCTIONAL PRIOR TO PAVING. A REPRESENTATIVE OF THE CITY MUST BE PRESENT MUST OBSERVE THE TESTING. ALL INSTALLED WATER LINES SHALL BE FLUSHED, DISINFECTED AND TESTED FOR BACTERIA IN ACCORDANCE WITH SECTION 401.3.9 OF THE ISPCW. THE WATER SYSTEM SHALL NOT BE OPENED TO THE CITY SYSTEM UNTIL THE CITY ISSUES AN INITIAL ACCEPTANCE OF THE SYSTEM.
- THE CONTRACTOR SHALL GUARANTEE ALL WORK FOR A PERIOD OF AT LEAST A ONE-YEAR FOLLOWING THE CITY'S INITIAL ACCEPTANCE.
- ANY IRRIGATION WATER BACKUP CONNECTED TO THE CITY POTABLE WATER SYSTEM MUST HAVE A REDUCED PRESSURE BACKFLOW ASSEMBLY. ALL INSTALLATIONS OF BACKFLOW ASSEMBLIES SHALL CONFORM WITH THE STANDARDS OF THE MOST RECENT EDITION OF THE PNWS-AWWA CROSS CONNECTION MANUAL. BACKFLOW ASSEMBLIES SHALL ALSO MEET THE REQUIREMENTS OF THE IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY. FINAL INSPECTION OF BACKFLOW DEVICES WILL BE CONDUCTED AFTER DEVICES HAVE BEEN TESTED BY A STATE CERTIFIED BACKFLOW TESTER, LICENSED TO DO BUSINESS IN GARDEN CITY.

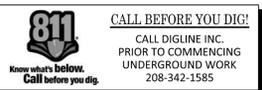
DRAINAGE

- CONTACT THE DESIGN ENGINEER DURING EXCAVATION OF THE ONSITE STORMWATER FACILITIES. DESIGN ENGINEER OR HIS REPRESENTATIVE MUST INSPECT EXCAVATION AND THE MATERIALS BEING USED FOR CONFORMANCE WITH THE APPROVED PLANS. THE CITY MAY STILL OBSERVE THE INSTALLATION, BUT THE DESIGN ENGINEER IS PRIMARILY RESPONSIBLE FOR PLAN CONFORMANCE OF THE ONSITE DRAINAGE FACILITIES.
- ALL INSPECTIONS SHALL REQUIRE A 24-HOUR NOTICE PRIOR TO THE REQUESTED INSPECTION TIME. CALL THE INSPECTION HOT LINE AT 472-2920.
- PRIOR TO ANY EARTHWORK A 24-HOUR NOTICE TO BEGIN CONSTRUCTION IS REQUIRED. CALL INSPECTION HOT LINE AT 472-2920.
- DRAINAGE INSPECTIONS SHALL BE CONDUCTED AT ANY GIVEN TIME OR UPON REQUEST, DURING CONSTRUCTION, VERIFYING COMPLIANCE WITH THE CITY REQUIREMENTS AND CONSTRUCTION ACTIVITIES ARE FOLLOWED AS PER THE APPROVED PLANS.
- THE DRAINAGE SYSTEM AND ANY FILTER FABRIC SHALL NOT BE COVERED PRIOR TO INSPECTION. CALL THE INSPECTION HOT LINE AT 472-2920.
- THE SIZE AND LOCATION OF THE DRAINAGE SYSTEM SHALL CORRESPOND WITH THE APPROVED DRAINAGE SYSTEM PLAN AND SHALL BE INSPECTED.
- FINAL INSPECTION OF THE STORM DRAINAGE SYSTEM SHALL BE CONDUCTED FOLLOWING THE PAVING AND FINAL LANDSCAPING.
- ALL DRAINAGE CONVEYANCE ACCESS POINTS SHALL BE STENCILED OR MARKED WITH IDENTIFYING STATEMENT FOR THE PUBLIC "DO NOT DUMP - SYSTEM DRAINS TO GROUNDWATER" OR "RIVER", WHICHEVER IS RELEVANT TO THE SYSTEM DISPOSAL DESIGN.
- TRAFFIC RATED MANHOLE LIDS SHALL BE USED.
- ALL PARKING LOT GRADES SHALL BE AT LEAST 1.5% FOR ASPHALTIC-CONCRETE AND 0.4% FOR CONCRETE.



UTILITY REPRESENTATIVES

UTILITY	REPRESENTATIVES	PHONE
GAS	INTERMOUNTAIN GAS	(208) 377-6839
ELECTRICITY	IDAHO POWER	(208) 388-6320
TELEPHONE	CENTURY LINK	(208) 385-2144
SEWER	GARDEN CITY	(208) 472-2900
WATER	GARDEN CITY	(208) 472-2900
ROADS	ADA COUNTY HIGHWAY DISTRICT	(208) 454-8135
IRRIGATION	N/A	
FIRE	BOISE FIRE	(208) 570-6555



OWNER
BILL TRUAX
PARKWAY STATION, LLC
P.O. BOX 50111
BOISE, ID 83705
(208) 447-9114

ARCHITECT
BOB SMITH
HUTCHISON SMITH ARCHITECTS
270 N. 27th ST.
BOISE, ID 83702
(208) 338-1212

SURVEYOR
CARL PORTER, P.L.S.
SAWTOOTH LAND SURVEYING, LLC.
2030 S. WASHINGTON AVE.
EMMETT, ID 83617
(208) 398-8104

CIVIL ENGINEER
JIM E. COSLETT, P.E.
ROCK SOLID CIVIL, LLC.
270 N. 27TH STREET
BOISE, ID 83702
(208) 342-3277

AGENCY REVIEW NOT APPROVED FOR CONSTRUCTION

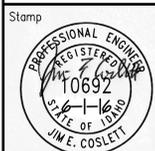
MIXED USE RESIDENTIAL
PARKWAY STATION
E. 42nd ST

GARDEN CITY, ID.

COVER, NOTES & VICINITY MAP

SHEET NO.
C1

ROCK SOLID CIVIL
Civil Engineering and Land Development Consulting
270 North 27th Street, Boise, ID 83702
Office Phone: 208.342.3277
www.rocksolidcivil.com



PROJECT: RSC 16-14
FILE: Parkway CV161wg
DATE: June 1, 2016
DRAWN: JDF
REVISIONS:

HUTCHISON SMITH ARCHITECTS
270 North 27th St. Boise, Idaho 83702 (208) 338-1212 Fax (208) 338-0011

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FINAL PLAT FOR
PARKWAY STATION

CENTRAL DISTRICT HEALTH DEPARTMENT

SANITARY RESTRICTIONS AS REQUIRED BY IDAHO CODE, TITLE 50, CHAPTER 13 HAVE BEEN SATISFIED. ACCORDING TO THE LETTER TO BE READ ON FILE WITH THE COUNTY RECORDER OR HIS AGENT LISTING THE CONDITIONS OF APPROVAL. SANITARY RESTRICTIONS MY BE RE-IMPOSED, IN ACCORDANCE WITH SECTION 50-1326, IDAHO CODE, BY THE ISSUANCE OF A CERTIFICATE OF DISAPPROVAL.

CENTRAL DISTRICT HEALTH DEPARTMENT, EHS DATE

APPROVAL OF ADA COUNTY HIGHWAY DISTRICT

THE FOREGOING PLAT WAS ACCEPTED AND APPROVED BY THE BOARD OF ADA COUNTY HIGHWAY DISTRICT COMMISSIONERS ON THE ____ DAY OF _____, _____.

PRESIDENT, ADA COUNTY HIGHWAY DISTRICT DATE

APPROVAL OF GARDEN CITY CITY ENGINEER

ACCEPTED AND APPROVED THIS ____ DAY OF _____, _____. BY THE CITY ENGINEER OF THE CITY OF GARDEN CITY, ADA COUNTY, IDAHO.

CITY ENGINEER DATE

APPROVAL OF GARDEN CITY CITY

I, _____, CITY CLERK IN AND FOR THE CITY OF GARDEN CITY, ADA COUNTY, IDAHO, DO HEREBY CERTIFY THAT AT A REGULAR MEETING OF THE CITY COUNCIL HELD ON THE ____ DAY OF _____, _____. THIS PLAT WAS DULY ACCEPTED AND APPROVED.

CITY CLERK DATE

APPROVAL OF COUNTY SURVEYOR

I, THE UNDERSIGNED COUNTY SURVEYOR IN AND FOR ADA COUNTY, IDAHO, DO HEREBY CERTIFY THAT I HAVE CHECKED THIS PLAT, AND FIND THAT IT COMPLIES WITH IDAHO CODE RELATING TO PLATS AND SURVEYS.

COUNTY SURVEYOR DATE
JERRY L. HASTINGS, PLS 5359

CERTIFICATE OF COUNTY TREASURER

I, THE UNDERSIGNED, COUNTY TREASURER IN AND FOR THE COUNTY OF ADA, STATE OF IDAHO, PER THE REQUIREMENTS I.C. 50.1308, DO HEREBY CERTIFY THAT ANY AND ALL CURRENT AND/OR DELINQUENT PROPERTY TAXES FOR THE PROPERTY INCLUDED IN THIS PROPOSED SUBDIVISION PLAT HAVE BEEN PAID IN FULL. THIS CERTIFICATION IS VALID FOR THE NEXT THIRTY (30) DAYS ONLY.

COUNTY TREASURER DATE

CERTIFICATE OF COUNTY RECORDER

STATE OF IDAHO }
COUNTY OF ADA } SS

I HEREBY CERTIFY THAT THIS INSTRUMENT WAS FILED AT THE REQUEST OF SAWTOOTH LAND SURVEYING, LLC. AT ____ MINUTES PAST ____ O'CLOCK ____ M. ON THIS ____ DAY OF _____, _____. IN BOOK _____ OF PLATS, AT PAGES _____ THROUGH _____, INSTRUMENT NO. _____.

DEPUTY EX-OFFICIO RECORDER



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EMMETT, IDAHO

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SHEET:	DATE:	DRAWN BY:	CHECKED BY:	JOB#:	DWG#:
5 OF 5	05/14/2016	JDF	CP	16054	16054-FP

FINAL PLAT FOR
PARKWAY STATION

BOOK _____, PAGE _____.

CERTIFICATE OF OWNER

KNOW ALL MEN BY THESE PRESENTS:

THAT WE THE UNDERSIGNED DO HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE REAL PROPERTY AS DESCRIBED BELOW AND IT IS OUR INTENTION TO INCLUDE SAID PROPERTY IN THIS SUBDIVISION PLAT.

THE OWNERS FURTHER CERTIFY, THAT ALL LOTS IN THIS SUBDIVISION WILL RECEIVE DOMESTIC WATER FROM CITY OF GARDEN CITY, INCORPORATED AND THAT CITY OF GARDEN CITY, HAS AGREED IN WRITING TO SERVE ALL OF THE LOTS IN THIS SUBDIVISION. (I.C. 50-1334)

THE EASEMENTS AS SHOWN ON THIS PLAT ARE NOT DEDICATED TO THE PUBLIC, HOWEVER THE RIGHT TO USE SAID EASEMENTS IS HEREBY PERPETUALLY RESERVED FOR PUBLIC UTILITIES AND FOR ANY OTHER USES AS DESIGNATED HEREON, AND NO PERMANENT STRUCTURES ARE TO BE ERRECTED WITHIN THE LINES OF SAID EASEMENTS.

LEGAL DESCRIPTION

A parcel of land being all of Lots 1-6, Block 17 of Fairview Acres Subdivision No. 3, as shown on file in Book _____ of Plats at Page 617, Ada County Records, and located in the SE1/4 of the SW1/4 of Section 32, T. 4 N., R. 2 E., B.M., City of Garden City, Ada County, Idaho, more particularly described as follows;

COMMENCING

LEGAL FROM SAWTOOTH

to the **POINT OF BEGINNING**.

The above described parcel contains 1.22 acres more or less.

XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXX

ACKNOWLEDGEMENT

STATE OF _____ }
COUNTY OF _____ } SS

ON THIS _____ DAY OF _____, 2016, BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR SAID STATE, PERSONALLY APPEARED BILL TRUAX, KNOWN OR IDENTIFIED TO ME TO BE THE MANAGER OF PARKWAY STATION, LIMITED LIABILITY COMPANY, THAT EXECUTED THE INSTRUMENT ON BEHALF OF SAID LIMITED LIABILITY COMPANY, AND ACKNOWLEDGED TO ME THAT SUCH LIMITED LIABILITY COMPANY EXECUTED THE SAME.

IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND AND SEAL THE DAY AND YEAR IN THIS CERTIFICATE FIRST ABOVE WRITTEN.

NOTARY PUBLIC FOR IDAHO

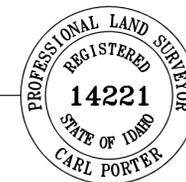
RESIDING AT _____.

MY COMMISSION EXPIRES _____.

CERTIFICATE OF SURVEYOR

I, CARL PORTER, DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, LICENSED BY THE STATE OF IDAHO, AND THAT THIS PLAT, AS DESCRIBED IN THE "CERTIFICATE OF OWNERS" AND THE ATTACHED PLAT, WAS DRAWN FROM AN ACTUAL SURVEY MADE ON THE GROUND UNDER MY DIRECT SUPERVISION AND ACCURATELY REPRESENTS THE POINTS PLATTED THEREON IN CONFORMITY WITH THE STATE OF IDAHO CODES RELATING TO PLATS, SURVEYS AND THE CORNER PERPETUATION AND FILING ACT, IDAHO CODE 55-1601 THROUGH 55-1612.

CARL PORTER



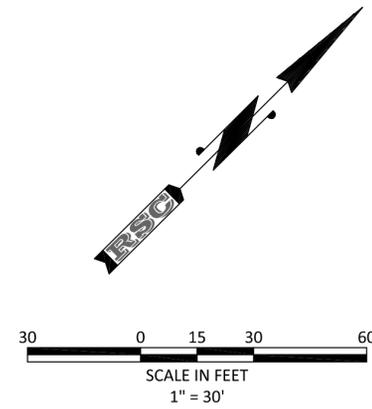
P.L.S. 14221

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4 OF 5	05/14/2016	JDF	CP	16054	16054-FP

FINAL PLAT FOR PARKWAY STATION



SEE SHEET 2 FOR LEGEND
AND LINE & CURVE TABLES

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EMMETT, IDAHO

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3 OF 5	05/14/2016	JDF	CP	16054	16054-FP

FINAL PLAT FOR PARKWAY STATION

LEGEND

	SECTION LINE
	CENTERLINE
	RIGHT OF WAY LINE
	EXISTING DEED OR LOT LINE
	EXISTING EASEMENT
	PROPERTY BOUNDARY
	FOUND ALUMINUM CAP MONUMENT
	FOUND 5/8" REBAR AS NOTED
	FOUND 1/2" REBAR AS NOTED
	CALCULATION POINT, NOTHING FOUND, NOTHING SET
	LOT LINE
	NEW EASEMENT LINE
	SETBACK LINE
	SET 5/8" REBAR, PLS 14221
	SET 1/2" REBAR, PLS 14221
	RECORD INFORMATION
	WITNESS CORNER
	LOT NUMBER
	BLOCK 1
	BLOCK NUMBER

NOTES

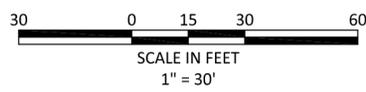
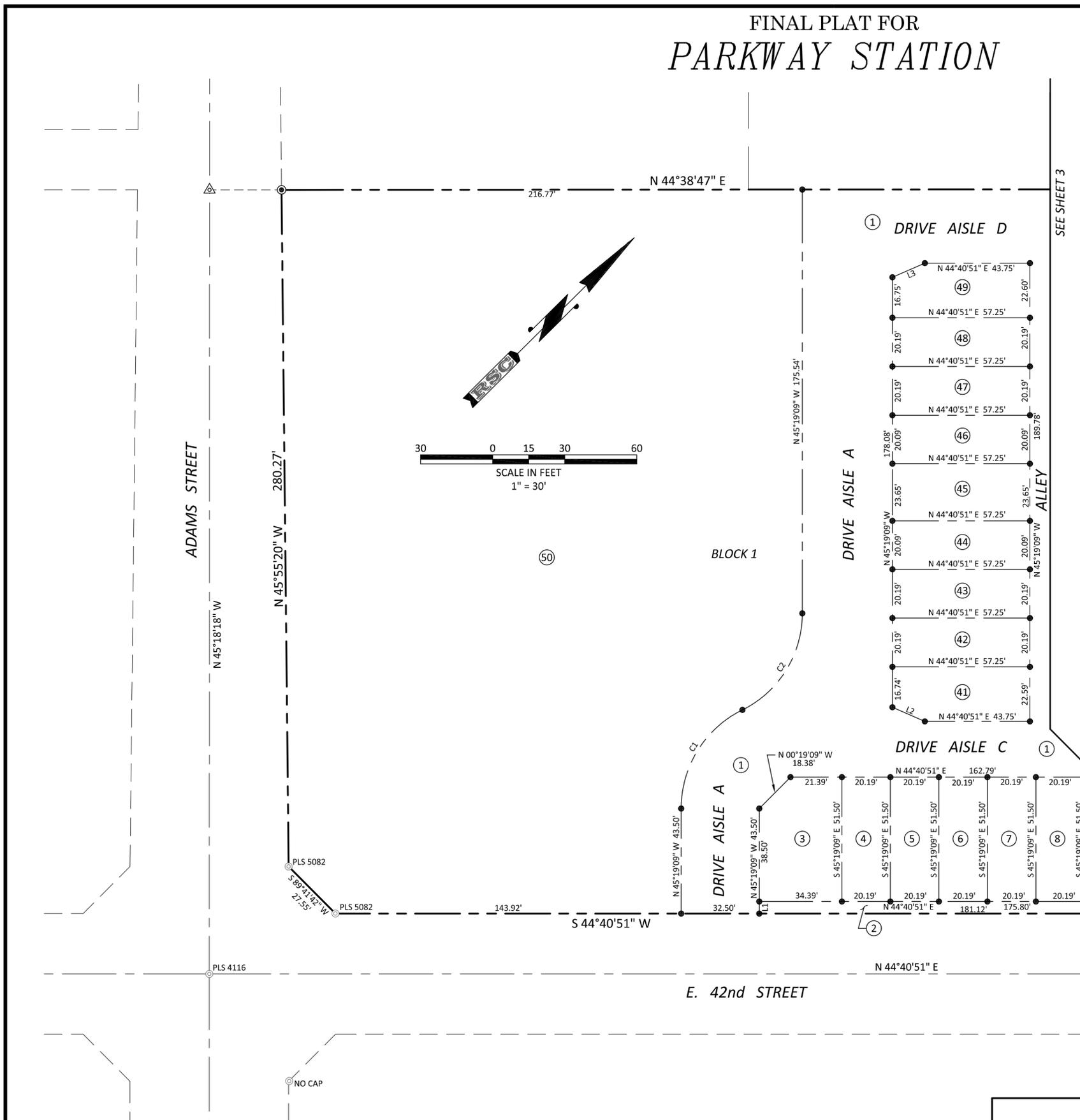
- MINIMUM BUILDING SETBACKS SHALL BE IN ACCORDANCE WITH THE GARDEN CITY APPLICABLE ZONING AND SUBDIVISION REGULATIONS AT THE TIME OF ISSUANCE OF INDIVIDUAL BUILDING PERMITS OR AS SPECIFICALLY APPROVED AND/OR REQUIRED, OR AS SHOWN ON THIS PLAT.
- MINIMUM BUILDING SETBACK LINES SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
FRONT: 10- FEET MAXIMUM*
REAR: 0- FEET (FACING DRIVEWAYS)
SIDE: 0- FEET TO 3- FEET BETWEEN UNITS
STREET SIDE: 0- FEET FACING PRIVATE STREET OR COMMON AREA
* FOR LOTS 21-24, 26-30 FACING THE COMMUNITY GARDEN (LOT 25), A 13- FOOT FRONT SETBACK IS PERMITTED.
- ANY RESUBDIVISION OF THIS PLAT SHALL COMPLY WITH THE APPLICABLE REGULATIONS IN EFFECT AT THE TIME OF RESUBDIVISION.
- LOT 50, BLOCK 1 IS HEREBY DESIGNATED AS HAVING A PERMANENT PUBLIC UTILITIES, DRAINAGE AND IRRIGATION EASEMENT OVER THE TEN (10) FEET CONTIGUOUS TO AND PARALLEL WITH LOT 1. HOWEVER, THIS SHALL NOT PRECLUDE THE CONSTRUCTION OF PROPER HARD SURFACE DRIVEWAYS FOR ACCESS TO LOT 50.
- LOT 1, BLOCK 1 IS PROPOSED TO PROVIDE A BLANKET PERMANENT PUBLIC UTILITIES, DRAINAGE AND SHARED DRIVEWAY, CROSS ACCESS & EMERGENCY ACCESS EASEMENT.
- ALL LOTS IN THIS SUBDIVISION ARE SINGLE FAMILY RESIDENTIAL EXCEPT FOR LOTS 1, 2, 11, 20, 25, 31, 36 AND 45 OF BLOCK 1 WHICH ARE COMMON LOTS THAT SHALL BE OWNED AND MAINTAINED BY THE PARKWAY STATION HOMEOWNER'S ASSOCIATION. THESE LOTS CANNOT BE DEVELOPED FOR RESIDENTIAL PURPOSES IN THE FUTURE.
- THE DEVELOPMENT OF THIS PROPERTY SHALL BE IN COMPLIANCE WITH THE GARDEN CITY ZONING ORDINANCE OR AS SPECIFICALLY APPROVED BY CAR13-00013 AND CFH 13-00027.
- ONLY DESIGNATED VEHICLE ACCESS CURB CUTS SHOWN ON THE FINAL PLAT ARE PERMITTED.
- COVENANTS, CONDITIONS AND RESTRICTIONS (CC&Rs) FOR THIS SUBDIVISION ARE RECORDED AS INST. NO. _____.

LINE TABLE

LINE	BEARING	DISTANCE
L1	N 45°19'09" W	5.00'
L2	N 68°06'46" E	14.71'
L3	N 21°14'56" E	14.71'
L4	N 45°19'09" W	9.37'
L5	N 05°16'31" E	6.89'
L6	N 73°33'53" E	6.08'
L7	N 21°14'56" E	14.71'
L8	N 68°06'46" E	14.71'
L9	N 45°19'09" W	9.37'
L10	N 84°05'11" E	6.89'
L11	N 45°18'18" W	5.00'
L12	N 06°05'25" W	2.32'
L13	N 44°40'51" E	1.85'
L14	N 00°19'09" W	2.12'
L15	N 45°19'09" W	18.50'
L16	N 44°40'51" E	4.85'
L17	N 45°19'09" W	3.00'
L18	N 44°40'51" E	4.00'
L19	N 44°40'51" E	6.50'
L20	N 45°19'09" W	6.47'
L21	N 10°50'00" E	6.62'
L22	N 45°19'09" W	1.26'
L23	N 44°40'51" E	24.96'
L24	N 45°19'09" W	19.76'
L25	N 44°40'51" E	22.99'

CURVE TABLE

CURVE	ARC LENGTH	DELTA ANGLE	RADIUS	CHORD BEARING	CHORD LENGTH
C1	50.75'	63°54'36"	45.50'	N 13°21'51" W	48.16'
C2	49.64'	63°54'36"	44.50'	N 13°21'51" W	47.10'
C3	36.29'	78°27'27"	26.50'	N 83°54'35" E	33.52'
C4	29.06'	90°00'00"	18.50'	N 00°19'09" W	26.16'



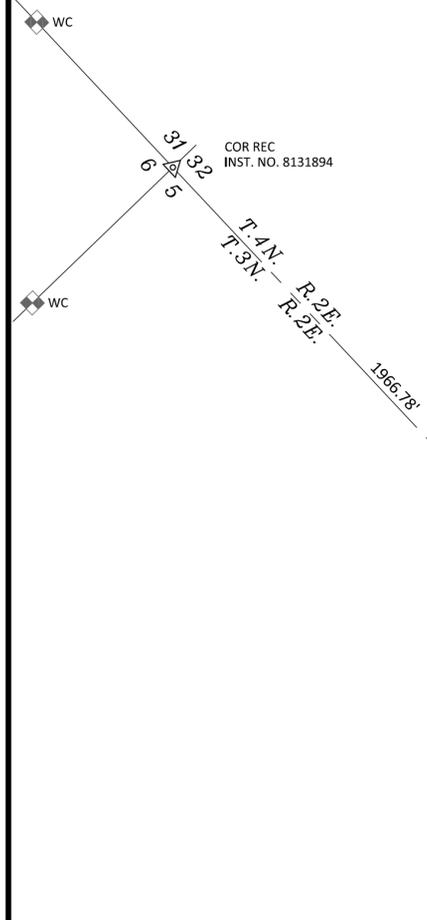
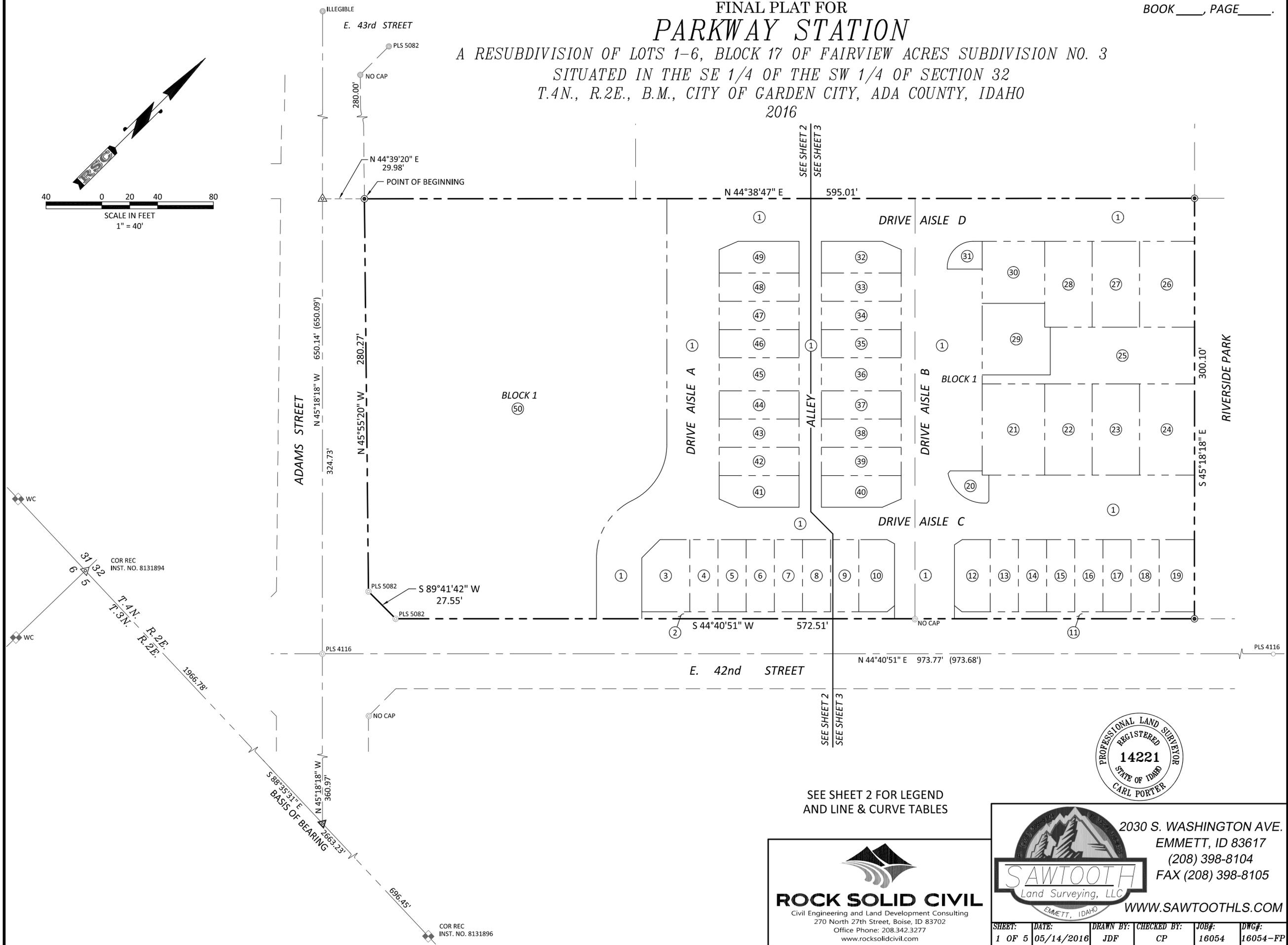
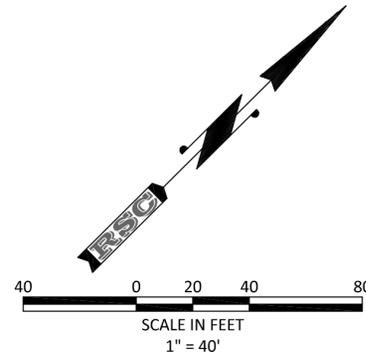
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WWW.SAWTOOTHLS.COM

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2 OF 5	05/14/2016	JDF	CP	16054	16054-FP

FINAL PLAT FOR PARKWAY STATION

A RESUBDIVISION OF LOTS 1-6, BLOCK 17 OF FAIRVIEW ACRES SUBDIVISION NO. 3
SITUATED IN THE SE 1/4 OF THE SW 1/4 OF SECTION 32
T.4N., R.2E., B.M., CITY OF GARDEN CITY, ADA COUNTY, IDAHO
2016



SEE SHEET 2 FOR LEGEND
AND LINE & CURVE TABLES



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1 OF 5	05/14/2016	JDF	CP	16054	16054-FP

COR REC
INST. NO. 8131896

COR REC
INST. NO. 8131894

Mr. Doug Crowther
Parkway Station, LLC
PO Box 50111
Boise, ID 83705
208-863-9517

Re: Limited Geotechnical Engineering Report
Parkway Station Mixed-Use Development
4232 Adams Street
Boise, ID

Dear Mr. Crowther:

In compliance with your instructions, MTI has conducted a limited soils exploration for the above referenced development. Fieldwork for this investigation was conducted on 30 November 2015. The proposed development is in the northern portion of the City of Garden City, Ada County, ID, and occupies a portion of the SE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 32, Township 4 North, Range 2 East, Boise Meridian. This project is expected to consist of 6 multi-unit townhome structures, 1 apartment building, 9 cottages, and 2 commercial structures, to be developed with spread/continuous footings and concrete floor slabs. Residential structures are to be wood framed and 3 to 4 stories in height. Commercial structures will be steel stud and are anticipated to be single-story. The site to be developed is approximately 4.2 acres in size. In addition, light and heavy duty paved areas will be developed for both access and parking. Per your request, the scope of this initial investigation was to determine groundwater and site drainage information.

Authorization

Authorization to perform this exploration and analysis was given in the form of a written authorization to proceed from Mr. Doug Crowther of Parkway Station, LLC to Monica Saculles of Materials Testing and Inspection, Inc. (MTI), on 23 November 2015. Said authorization is subject to terms, conditions, and limitations described in the Professional Services Contract entered into between Parkway Station, LLC and MTI. Our scope of services for the proposed development has been provided in our proposal dated 13 November 2015.

Scope of Investigation

The scope of this investigation included review of geologic literature and existing available geotechnical studies of the area, visual site reconnaissance of the immediate site, subsurface exploration of the site, field and laboratory testing of materials collected, and engineering analysis and evaluation of. At this time our scope of work does not include foundation design, pavement design, or earthwork recommendations.

Regional Geology

The project site is located within the western Snake River Plain of southwestern Idaho and eastern Oregon. The plain is a northwest trending rift basin, about 45 miles wide and 200 miles long, that developed about 14 million years ago (Ma) and has since been occupied sporadically by large inland lakes. Geologic materials found within and along the plain's margins reflect volcanic and fluvial/lacustrine sedimentary processes that have led to an accumulation of approximately 1 to 2 km of interbedded volcanic and sedimentary deposits within the plain. Along the margins of the plain, streams that drained the highlands to the north and south provided coarse to fine-grained sediments eroded from granitic and volcanic rocks, respectively. About 2 million years ago the last of the lakes was drained and since that time fluvial erosion and deposition has dominated the evolution of the landscape. The project site is underlain by "Alluvium of Boise River" as mapped by Othberg and Stanford (1993). These Holocene (10,000 years ago to present) age deposits accumulated as the result of stream processes on low-lying river beds, flood plains and alluvial fans. Deposits are composed of sandy cobble gravel upstream grading to sandy pebble gravel downstream and typically contain no pedogenic clay. Gravel deposits underlie the flood plain of the Boise River to depths of 23-35 feet and overlie a surface cut by the river into earlier Tertiary basin-fill sediments.

General Site Characteristics

This proposed development consists of approximately 4.2 acres of relatively flat and level terrain. Throughout the majority of the site, surficial materials consist of sand-gravel fill mixtures. Vegetation primarily consists of mature trees and limited landscape grasses.

Regional drainage is north and west toward the Boise River. Stormwater drainage for the site is achieved by percolation through surficial soils. The site is situated so that it is unlikely that it will receive any stormwater drainage from off-site sources. Stormwater drainage collection and retention systems are in place on the project site and currently exist in adjacent roadways in the form of drop inlets.

Exploration and Sampling Procedures

Field exploration conducted to determine engineering characteristics of subsurface materials included a reconnaissance of the project site and investigation by test pit. Test pit sites were located in the field by means of a Global Positioning System (GPS) device and are reportedly accurate to within sixteen feet. Upon completion of investigation, each test pit was backfilled with loose excavated materials. Re-excavation and compaction of these test pit areas are required prior to construction of overlying structures.

In addition, samples were obtained from representative soil strata encountered. Samples obtained have been visually classified in the field by professional staff, identified according to test pit number and depth, placed in sealed containers, and transported to our office. Subsurface materials have been described in detail on logs provided in the **Enclosures** section. Results of field are also presented in the **Enclosures** section. MTI recommends that these logs **not** be used to estimate fill material quantities.

Soil and Sediment Profile

The profile below represents a generalized interpretation for the project site. Note that on site soils strata, encountered between test pit locations, may vary from the individual soil profiles presented in the logs, which can be found in the **Enclosures** section.

The materials encountered during exploration were quite typical for the geologic area mapped as Alluvium of Boise River. Surficial materials were predominately poorly graded gravel with sand fills and silty sand fills. Poorly graded gravel with sand fills were light brown, dry, medium dense to dense, and contained fine to coarse-grained sand and 3-inch-minus cobbles. Silty sand fills were brown, dry, medium dense, and contained fine-grained sand. Underlying the surficial fill materials, silty sand sediments were encountered. Silty sands were dark brown, slightly moist, medium dense, and contained fine to medium-grained sand. At depth across the site poorly graded gravel with sand sediments were encountered with a few occurrences of poorly graded sand sediments. Poorly graded gravel and sand sediments were tan to light brown, dry to saturated, medium dense, and contained fine to coarse-grained sand, fine to coarse gravel, and 8-inch-minus cobbles.

Test pit walls exhibited moderate to significant sloughing. However, moisture contents will also affect wall competency with saturated soils having a tendency to readily slough when under load and unsupported.

Groundwater

During this field investigation, groundwater was encountered in test pits at depths ranging from 8.4 to 9.9 feet bgs. Actual groundwater depths varied with topography and distance from the Boise River to the north of the project site. Soil moistures in the test pits were generally dry to slightly moist within surficial soils. Within the poorly graded gravels, soil moistures graded from slightly moist to saturated as the water table was approached and penetrated.

In the vicinity of the project site, groundwater levels are controlled in large part by the stage and flow of the Boise River. Maximum groundwater elevations likely occur during late spring to early summer runoff season. During previous investigations performed in March 2005, June 2007, June 2011, and January 2014 within approximately ½-mile to the southeast and south of the project site, groundwater was encountered within numerous borings and test pits at depths ranging from 6.2 to 9.1 feet bgs. Furthermore, according groundwater monitoring data collected by MTI at the Trailwinds project directly to the southeast of the project site, groundwater was encountered as shallow as 6.8 feet bgs.

Based on evidence of this investigation and background knowledge of the area, MTI estimates groundwater depths to remain greater than approximately 5.8 feet bgs throughout the year. This depth can be confirmed through long-term groundwater monitoring.

Soil Infiltration Rates

Soil permeability, which is a measure of the ability of a soil to transmit a fluid, was not tested in the field. Given the absence of direct measurements, for this report an estimation of infiltration is presented using generally recognized values for each soil type and gradation. Of soils comprising the generalized soil profile for this study, silty sand sediments usually display rates of 4 to 8 inches per hour. Poorly graded sand and gravel sediments typically exhibit infiltration values in excess of 12 inches per hour.

It is recommended that infiltration facilities constructed on the site be extended into native poorly graded gravel or sand sediments. Excavation depths of approximately 2 to 4 feet bgs should be anticipated to expose these poorly graded gravel with sand sediments. Because of the high soil permeability, ASTM C33 filter sand, or equivalent, should be incorporated into design of infiltration facilities. An infiltration rate of 8 inches per hour should be used in design. Actual infiltration rates should be confirmed at the time of construction.

Warranty and Limiting Conditions

MTI warrants that findings and conclusions contained herein have been formulated in accordance with generally accepted professional engineering practice in the fields of foundation engineering, soil mechanics, and engineering geology only for the site and project described in this report. These engineering methods have been developed to provide the client with information regarding apparent or potential engineering conditions relating to the site within the scope cited above and are necessarily limited to conditions observed at the time of the site visit and research. Field observations and research reported herein are considered sufficient in detail and scope to form a reasonable basis for the purposes cited above.

Exclusive Use

This report was prepared for exclusive use of the property owner(s), at the time of the report, and their retained design consultants (“Client”). Conclusions and recommendations presented in this report are based on the agreed-upon scope of work outlined in this report together with the Contract for Professional Services between the Client and Materials Testing and Inspection, Inc. (“Consultant”). Use or misuse of this report, or reliance upon findings hereof, by parties other than the Client is at their own risk. Neither Client nor Consultant make representation of warranty to such other parties as to accuracy or completeness of this report or suitability of its use by such other parties for purposes whatsoever, known or unknown, to Client or Consultant. Neither Client nor Consultant shall have liability to indemnify or hold harmless third parties for losses incurred by actual or purported use or misuse of this report. No other warranties are implied or expressed.

Report Recommendations are Limited and Subject to Misinterpretation

There is a distinct possibility that conditions may exist that could not be identified within the scope of the investigation or that were not apparent during our site investigation. Findings of this report are limited to data collected from noted explorations advanced and do not account for unidentified fill zones, unsuitable soil types or conditions, and variability in soil moisture and groundwater conditions. To avoid possible misinterpretations of findings, conclusions, and implications of this report, MTI should be retained to explain the report contents to other design professionals as well as construction professionals.

Since actual subsurface conditions on the site can only be verified by earthwork, note that construction recommendations are based on general assumptions from selective observations and selective field exploratory sampling. Upon commencement of construction, such conditions may be identified that require corrective actions, and these required corrective actions may impact the project budget. Therefore, construction recommendations in this report should be considered preliminary, and MTI should be retained to observe actual subsurface conditions during earthwork construction activities to provide additional construction recommendations as needed.

Since geotechnical reports are subject to misinterpretation, **do not** separate the soil logs from the report. Rather, provide a copy of, or authorize for their use, the complete report to other design professionals or contractors. Locations of exploratory sites referenced within this report should be considered approximate locations only. For more accurate locations, services of a professional land surveyor are recommended.

This report is also limited to information available at the time it was prepared. In the event additional information is provided to MTI following publication of our report, it will be forwarded to the client for evaluation in the form received.

Environmental Concerns

Comments in this report concerning either onsite conditions or observations, including soil appearances and odors, are provided as general information. These comments are not intended to describe, quantify, or evaluate environmental concerns or situations. Since personnel, skills, procedures, standards, and equipment differ, a geotechnical investigation report is not intended to substitute for a geoenvironmental investigation or a Phase II/III Environmental Site Assessment. If environmental services are needed, MTI can provide, via a separate contract, those personnel who are trained to investigate and delineate soil and water contamination.

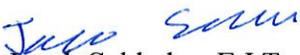
General Comments

Often, questions arise concerning soil conditions because of design and construction details that occur on a project. MTI would be pleased to continue our role as geotechnical engineers during project implementation. Additionally, MTI can provide materials testing and special inspection services during construction of this project. If you will advise us of the appropriate time to discuss these engineering services, we will meet with you at your convenience.

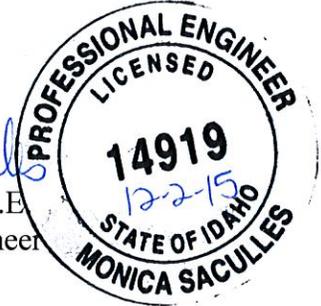
Environmental Services Geotechnical Engineering Construction Materials Testing Special Inspections

MTI appreciates this opportunity to be of service to you and looks forward to working with you in the future. If you have questions, please call (208) 376-4748.

Respectfully Submitted,
Materials Testing & Inspection, Inc.


Jacob Schlador, E.I.T.
Staff Engineer


Reviewed by: Monica Saculles, P.E.
Geotechnical Engineer



Enclosures:
Geotechnical General Notes
Geotechnical Investigation Test Pit Logs
Vicinity Map
Site Map

GEOTECHNICAL GENERAL NOTES

RELATIVE DENSITY AND CONSISTENCY CLASSIFICATION			
Coarse-Grained Soils	SPT Blow Counts (N)	Fine-Grained Soils	SPT Blow Counts (N)
Very Loose:	< 4	Very Soft:	< 2
Loose:	4-10	Soft:	2-4
Medium Dense:	10-30	Medium Stiff:	4-8
Dense:	30-50	Stiff:	8-15
Very Dense:	>50	Very Stiff:	15-30
		Hard:	>30

Moisture Content	
Description	Field Test
Dry	Absence of moisture, dusty, dry to touch
Moist	Damp but not visible moisture
Wet	Visible free water, usually soil is below water table

Cementation	
Description	Field Test
Weakly	Crumbles or breaks with handling or slight finger pressure
Moderately	Crumbles or breaks with considerable finger pressure
Strongly	Will not crumble or break with finger pressure

PARTICLE SIZE					
Boulders:	>12 in.	Coarse-Grained Sand:	5 to 0.6 mm	Silts:	0.075 to 0.005 mm
Cobbles:	12 to 3 in.	Medium-Grained Sand:	0.6 to 0.2 mm	Clays:	<0.005 mm
Gravel:	3 in. to 5 mm	Fine-Grained Sand:	0.2 to 0.075 mm		

UNIFIED SOIL CLASSIFICATION SYSTEM			
Major Divisions		Symbol	Soil Descriptions
Coarse-Grained Soils <50% passes No.200 sieve	Gravel & Gravelly Soils <50% coarse fraction passes No.4 sieve	GW	Well-graded gravels; gravel/sand mixtures with little or no fines
		GP	Poorly-graded gravels; gravel/sand mixtures with little or no fines
		GM	Silty gravels; poorly-graded gravel/sand/silt mixtures
		GC	Clayey gravels; poorly-graded gravel/sand/clay mixtures
	Sand & Sandy Soils >50% coarse fraction passes No.4 sieve	SW	Well-graded sands; gravelly sands with little or no fines
		SP	Poorly-graded sands; gravelly sands with little or no fines
		SM	Silty sands; poorly-graded sand/gravel/silt mixtures
		SC	Clayey sands; poorly-graded sand/gravel/clay mixtures
Fine Grained Soils >50% passes No.200 sieve	Silts & Clays LL < 50	ML	Inorganic silts; sandy, gravelly or clayey silts
		CL	Lean clays; inorganic, gravelly, sandy, or silty, low to medium-plasticity clays
		OL	Organic, low-plasticity clays and silts
	Silts & Clays LL > 50	MH	Inorganic, elastic silts; sandy, gravelly or clayey elastic silts
		CH	Fat clays; high-plasticity, inorganic clays
		OH	Organic, medium to high-plasticity clays and silts
Highly Organic Soils	PT	Peat, humus, hydric soils with high organic content	

GEOTECHNICAL INVESTIGATION TEST PIT LOG

Test Pit Log #: TP-1 **Date Advanced:** 30 Nov 2015 **Logged by:** Monica Saculles, P.E.

Excavated by: Struckman's Backhoe Service

Location: See Site Map Plates

Latitude: 43.63538

Longitude: -116.24606

Depth to Water Table: 8.4 Feet bgs

Total Depth: 9.0 Feet bgs

Depth (Feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (Feet bgs)	Qp	Lab Test ID
0.0-0.9	Silty Sand Fill (SM-FILL): <i>Brown, dry, medium dense, with fine-grained sand.</i> --Surficial gravel layer encountered. --Top 2 to 4 inches were frozen.				
0.9-1.7	Silty Sand (SM): <i>Dark brown, slightly moist, medium dense, with fine to medium-grained sand.</i> --Organics present throughout.				
1.7-5.6	Poorly Graded Sand (SP): <i>Tan, dry to slightly moist, medium dense, with fine-grained sand.</i> --Iron staining was present throughout.				
5.6-9.0	Poorly Graded Gravel with Sand (GP): <i>Tan to light brown, slightly moist to saturated, medium dense, with fine to coarse-grained sand, fine to coarse gravel, and 8-inch-minus cobbles.</i>				

GEOTECHNICAL INVESTIGATION TEST PIT LOG

Test Pit Log #: TP-2 **Date Advanced:** 30 Nov 2015 **Logged by:** Monica Sacules, P.E.

Excavated by: Struckman's Backhoe Service **Location:** See Site Map Plates

Latitude: 43.63527 **Longitude:** -116.24656

Depth to Water Table: 9.9 Feet bgs **Total Depth:** 10.2 Feet bgs

Depth (Feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (Feet bgs)	Qp	Lab Test ID
0.0-1.2	Poorly Graded Gravel with Sand Fill (GP-FILL): <i>Light brown, dry, medium dense, with fine to coarse-grained sand and 3/4-inch-minus gravel.</i> --Top 4 to 6 inches were frozen.				
1.2-2.8	Silty Sand (SM): <i>Dark brown, slightly moist, medium dense, with fine to medium-grained sand.</i>				
2.8-10.2	Poorly Graded Gravel with Sand (GP): <i>Tan to light brown, slightly moist to saturated, medium dense, with fine to coarse-grained sand, fine to coarse gravel, 8-inch-minus cobbles, and occasional 12-inch-minus cobbles.</i>				

GEOTECHNICAL INVESTIGATION TEST PIT LOG

Test Pit Log #: TP-3 **Date Advanced:** 30 Nov 2015 **Logged by:** Monica Saculles, P.E.

Excavated by: Struckman's Backhoe Service

Location: See Site Map Plates

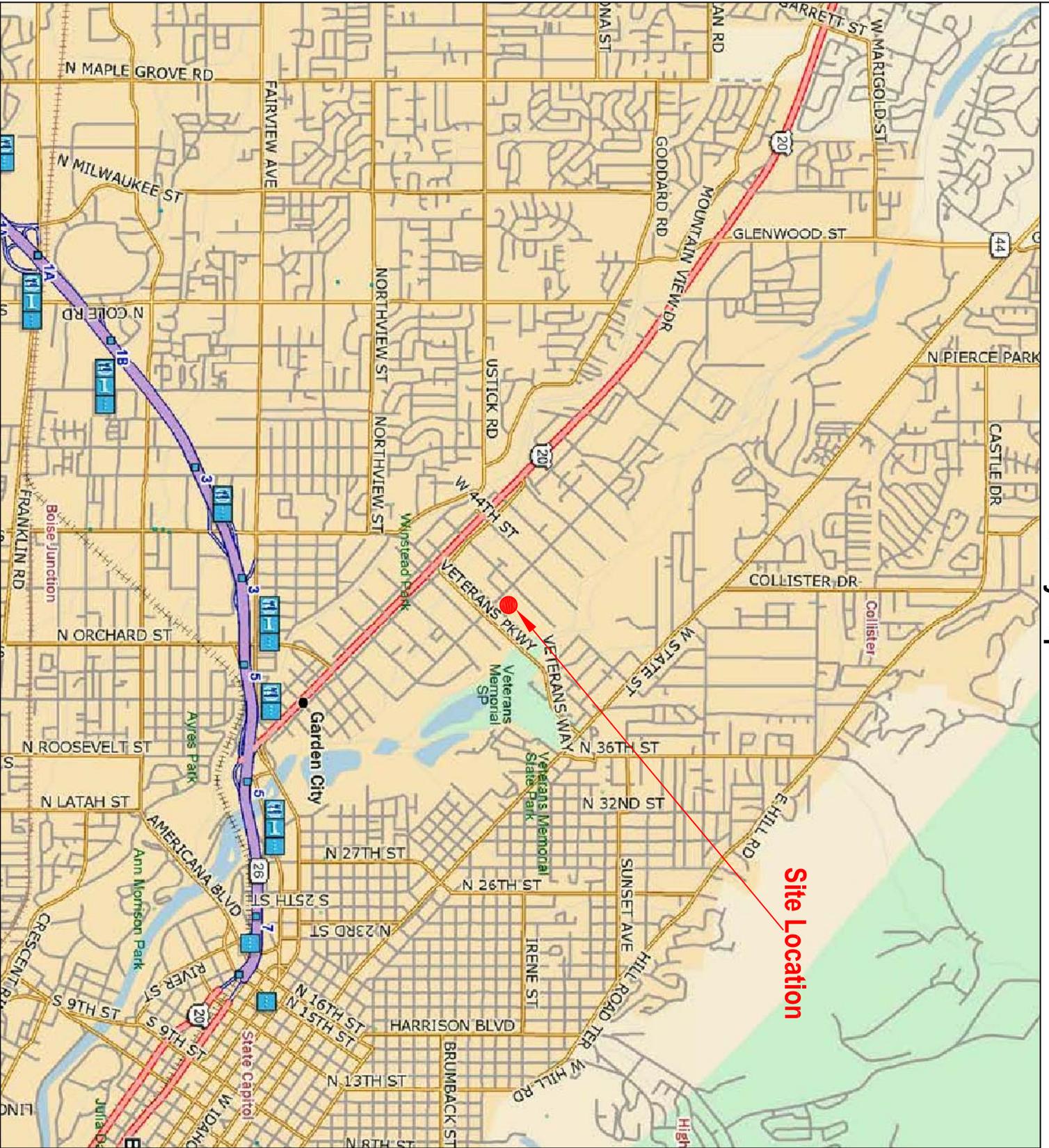
Latitude: 43.63495

Longitude: -116.24708

Depth to Water Table: 9.5 Feet bgs

Total Depth: 9.5 Feet bgs

Depth (Feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (Feet bgs)	Qp	Lab Test ID
0.0-1.4	Poorly Graded Gravel with Sand Fill (GP-FILL): <i>Light brown, dry, dense, with fine to coarse-grained sand, and 3-inch-minus cobbles.</i> <i>--Top 6 inches were frozen.</i>				
1.4-4.2	Silty Sand (SM): <i>Dark brown, slightly moist, medium dense, with fine to medium-grained sand.</i> <i>--Encountered an abandoned PVC pipe at 1.4 feet bgs and an abandoned electrical line at 4.1 feet bgs.</i>				
4.2-6.4	Poorly Graded Sand with Gravel (SP): <i>Tan, slightly moist, medium dense, with fine to medium-grained sand.</i> <i>--Iron staining encountered throughout.</i>				
6.4-9.5	Poorly Graded Gravel with Sand (GP): <i>Tan to light brown, slightly moist to saturated, medium dense, with fine to coarse-grained sand, fine to coarse gravel, 8-inch-minus cobbles, and occasional 12-inch-minus cobbles.</i>				



- MAP NOTES:**
- Delorme Street Atlas
 - Not to Scale

- LEGEND**
- Approximate Site Location



Parkway Station
4232 Addams Street
Boise, ID

Modified from Delorme by: JBS
2 December 2015
Drawing: B151299g



MATERIALS TESTING & INSPECTION

2791 S. Victory View Way
Boise, ID 83709-2835

Phone: 208 376-4748
Fax: 208 322-6515
E-mail: mti@mthd.com

NOTES:

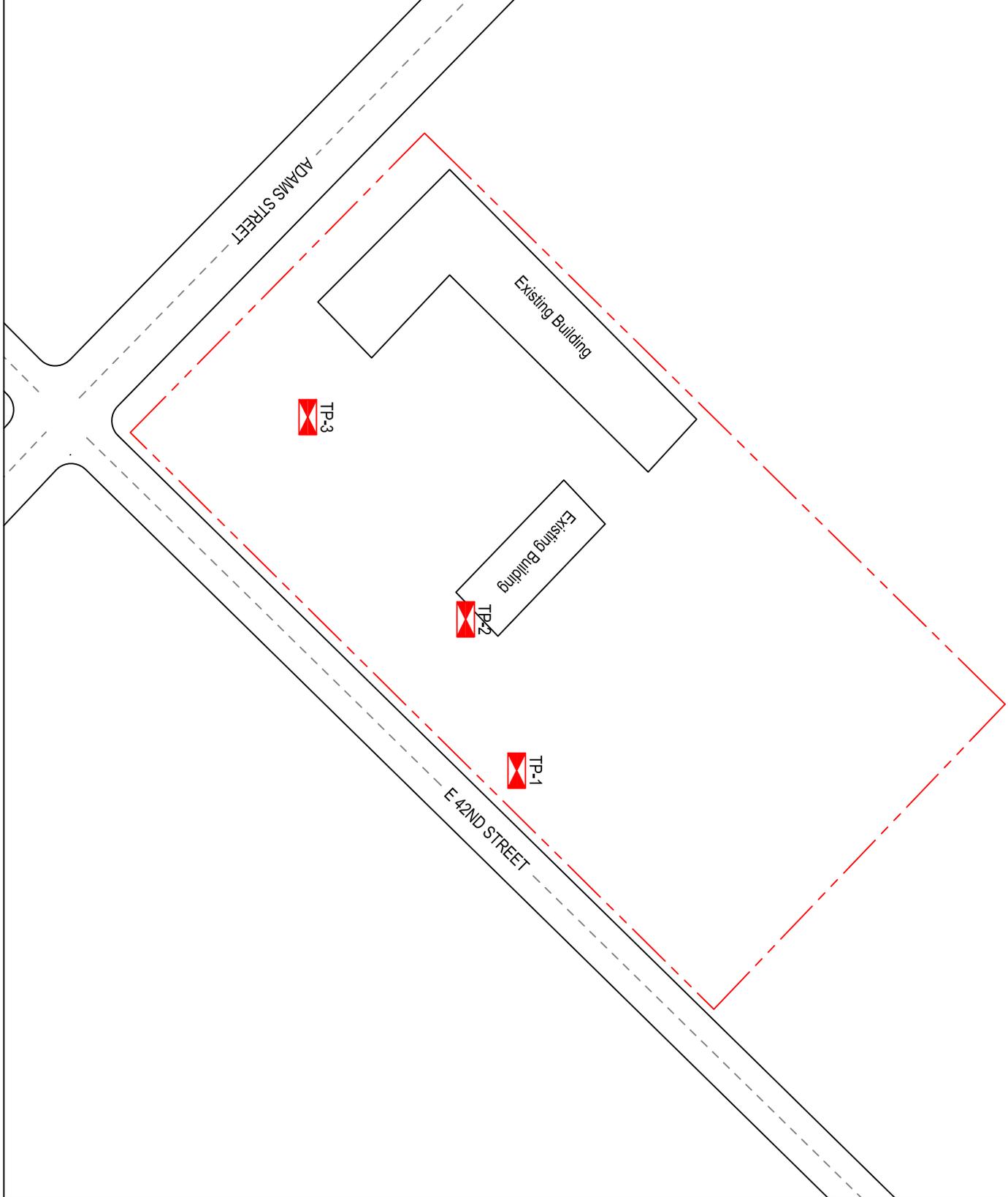
- Not to Scale

LEGEND

Approximate Site Boundary



Approximate MTI Test Pit Location



Parkway Station
4232 Adams Street
Boise, ID

Drawn by: JBS
2 December 2015
Drawing: B151299g



**MATERIALS
TESTING &
INSPECTION**

2791 S. Victory View Way
Boise, ID 83709-2835
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E-mail: mti@mti-hd.com



GEOTECHNICAL ENGINEERING REPORT
of
Trailwinds Development
Adams Street and 42nd Street
Garden City, ID

Prepared for:

Trailwinds
2008 North 32nd Street
Boise, ID 83702

MTI File Number BI40088g

Doug Crowther
Trailwinds
2008 North 32nd Street
Boise, ID 83702
(208) 863-9517

Re: Geotechnical Engineering Report
Trailwinds Development
Adams Street and 42nd Street
Garden City, ID

Dear Crowther:

In compliance with your instructions, we have conducted a soils exploration and foundation evaluation for the above referenced development. Fieldwork for this investigation was conducted on 23 January 2014. Data have been analyzed to evaluate pertinent geotechnical conditions. Results of this investigation, together with our recommendations, are to be found in the following report. We have provided a PDF copy for your review and distribution.

Often questions arise concerning soil conditions because of design and construction details that occur on a project. MTI would be pleased to continue our role as geotechnical engineers during project implementation. Additionally, MTI would be pleased in providing materials testing and special inspection services during construction of this project. If you will advise us of the appropriate time to discuss these engineering services, we will be pleased to meet with you at your convenience.

MTI appreciates this opportunity to be of service to you and looks forward to working with you in the future. If you have questions, please call (208) 376-4748.

Respectfully Submitted,
Materials Testing & Inspection


Monica Saculles, P.E.
Geotechnical Engineer




Reviewed by: Kevin L. Schroeder, P.G.
Geotechnical Services Manager



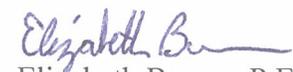

Reviewed by: Elizabeth Brown, P.E.
Geotechnical Engineer

TABLE OF CONTENTS

INTRODUCTION.....	3
Project Description	3
Authorization.....	3
Purpose	3
Scope of Investigation	3
Warranty and Limiting Conditions.....	4
Exclusive Use	4
Report Recommendation are Limited and Subject to Misinterpretation	4
Environmental Concerns	5
SITE DESCRIPTION.....	5
Site Access	5
Regional Geology.....	5
General Site Characteristics.....	5
Regional Site Climatology and Geochemistry.....	6
Geoseismic Setting	6
SOILS EXPLORATION	6
Exploration and Sampling Procedures.....	6
Laboratory Testing Program.....	7
Soil and Sediment Profile.....	7
Volatile Organic Scan.....	7
SITE HYDROLOGY	7
Groundwater.....	8
Soil Infiltration Rates	8
FOUNDATION, SLAB, AND PAVEMENT DISCUSSION AND RECOMMENDATIONS.....	8
Foundation Design Recommendations	9
Floor Slab-on-Grade.....	9
Recommended Pavement Sections.....	10
Flexible Pavement Sections.....	10
Common Pavement Section Construction Issues	11
CONSTRUCTION CONSIDERATIONS	11
Earthwork	12
Dry Weather	12
Wet Weather.....	12
Frozen Subgrade Soils.....	13
Structural Fill.....	13
Backfill of Walls.....	14
Excavations	14
Groundwater Control.....	14
GENERAL COMMENTS	15
REFERENCES.....	16
APPENDICES	17
Acronym List.....	17
Geotechnical General Notes	18
Geotechnical Investigation Test Pit Logs	19
AASHTO Pavement Thickness Design Procedures	21
Plate 1: Vicinity Map.....	23
Plate 2: Site Map	24

INTRODUCTION

This report presents results of a geotechnical investigation and analysis in support of data utilized in design of structures as defined in the 2012 International Building Code (IBC). Information in support of groundwater and storm water issues pertinent to the practice of Civil Engineering is included. Observations and recommendations relevant to the earthwork phase of the project are also presented. Revisions in plans or drawings for the proposed development from those enumerated in this report should be brought to the attention of the soils engineer to determine whether changes in foundation recommendations are required. Deviations from noted subsurface conditions, if encountered during construction, should also be brought to the attention of the soils engineer.

Project Description

The proposed development is in the southeastern portion of the City of Garden City, Ada County, ID, and occupies a portion of the SE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 32, Township 4 North, Range 2 East, Boise Meridian. This project is expected to consist of construction of a maximum two-story commercial/retail structure ranging from 15,000 to 17,000 square feet in size, and a 64-unit, three to four-story apartment building. The structures are to be developed on approximately 3.5 acres. Total settlements are limited to 1 inch. Loads of up to 4,000 pounds per lineal foot for wall footings, and column loads of up to 50,000 pounds were assumed for settlement calculations. Additionally, assumptions have been made for traffic loading of pavements. Retaining walls are not anticipated as part of the project. MTI has not been informed of the proposed grading plan.

Authorization

Authorization to perform this exploration and analysis was given in the form of a written authorization to proceed from Doug Crowther of Trailwinds to Monica Saculles of Materials Testing and Inspection, Inc. (MTI), on 23 January 2014. Said authorization is subject to terms, conditions, and limitations described in the Professional Services Contract entered into between Trailwinds and MTI. Our scope of services for the proposed development has been provided in our proposal dated 16 January 2014 and repeated below.

Purpose

The purpose of this Geotechnical Engineering Report is to determine various soil profile components and their engineering characteristics for use by either design engineers or architects in:

- Preparing or verifying suitability of foundation design and placement
- Preparing site drainage designs
- Indicating issues pertaining to earthwork construction
- Preparing light and heavy duty pavement section design requirements

Scope of Investigation

The scope of this investigation included review of geologic literature and existing available geotechnical studies of the area, visual site reconnaissance of the immediate site, subsurface exploration of the site, field and laboratory testing of materials collected, and engineering analysis and evaluation of foundation materials.

Warranty and Limiting Conditions

MTI warrants that findings and conclusions contained herein have been formulated in accordance with generally accepted professional engineering practice in the fields of foundation engineering, soil mechanics, and engineering geology only for the site and project described in this report. These engineering methods have been developed to provide the client with information regarding apparent or potential engineering conditions relating to the site within the scope cited above and are necessarily limited to conditions observed at the time of the site visit and research. Field observations and research reported herein are considered sufficient in detail and scope to form a reasonable basis for the purposes cited above.

Exclusive Use

This report was prepared for exclusive use of the property owner(s), at the time of the report, and their retained design consultants ("Client"). Conclusions and recommendations presented in this report are based on the agreed-upon scope of work outlined in this report together with the Contract for Professional Services between the Client and Materials Testing and Inspection, Inc. ("Consultant"). Use or misuse of this report, or reliance upon findings hereof, by parties other than the Client is at their own risk. Neither Client nor Consultant make representation of warranty to such other parties as to accuracy or completeness of this report or suitability of its use by such other parties for purposes whatsoever, known or unknown, to Client or Consultant. Neither Client nor Consultant shall have liability to indemnify or hold harmless third parties for losses incurred by actual or purported use or misuse of this report. No other warranties are implied or expressed.

Report Recommendation are Limited and Subject to Misinterpretation

There is a distinct possibility that conditions may exist that could not be identified within the scope of the investigation or that were not apparent during our site investigation. Findings of this report are limited to data collected from noted explorations advanced and do not account for unidentified fill zones, unsuitable soil types or conditions, and variability in soil moisture and groundwater conditions. To avoid possible misinterpretations of findings, conclusions, and implications of this report, MTI should be retained to explain the report contents to other design professionals as well as construction professionals.

Since actual subsurface conditions on the site can only be verified by earthwork, note that construction recommendations are based on general assumptions from selective observations and selective field exploratory sampling. Upon commencement of construction, such conditions may be identified that required corrective actions, and these required corrective actions may impact the project budget. Therefore, construction recommendations in this report should be considered preliminary, and MTI should be retained to observe actual subsurface conditions during earthwork construction activities to provide additional construction recommendations as needed.

Since geotechnical reports are subject to misinterpretation, **do not** separate the soil logs from the report. Rather, provide a copy, or authorize for their use, of the complete report to other design professional or contractors.

This report is also limited to information available at the time it was prepared. In the event additional information is provided to MTI following publication of our report, it will be forwarded to the client for evaluation in the form received.

Environmental Concerns

Comments in this report concerning either onsite conditions or observations, including soil appearances and odors, are provided as general information. These comments are not intended to describe, quantify, or evaluate environmental concerns or situations. Since personnel, skills, procedures, standards, and equipment differ, a geotechnical investigation report is not intended to substitute for a geoenvironmental investigation or a Phase II/III Environmental Site Assessment. If environmental services are needed, MTI can provide, via a separate contract, those personnel who are trained to investigate and delineate soil and water contamination.

SITE DESCRIPTION

Site Access

Access to the site may be gained via Interstate 184 to the Curtis Road exit. Proceed north on Curtis Road approximately 1.0 mile to where it becomes Veteran's Memorial Parkway. Continue on Veteran's Memorial Parkway roughly 0.3 mile to its intersection with Adams Street. The site occupies the northwest corner of this intersection. Presently the site exists as a vacant residence and a mostly vacant trailer park with associated paved areas. A few trailers are still present within the northern portion of the trailer park. The location is depicted on site map plates included in the **Appendix**.

Regional Geology

The project site is located within the western Snake River Plain of southwestern Idaho and eastern Oregon. The plain is a northwest trending rift basin, about 45 miles wide and 200 miles long, that developed about 14 million years ago (Ma) and has since been occupied sporadically by large inland lakes. Geologic materials found within and along the plain's margins reflect volcanic and fluvial/lacustrine sedimentary processes that have led to an accumulation of approximately 1 to 2 km of interbedded volcanic and sedimentary deposits within the plain. Along the margins of the plain, streams that drained the highlands to the north and south provided coarse to fine-grained sediments eroded from granitic and volcanic rocks, respectively. About 2 million years ago the last of the lakes was drained and since that time fluvial erosion and deposition has dominated the evolution of the landscape. The project site is underlain by "Alluvium of Boise River" as mapped by Othberg and Stanford (1993). These Holocene (10,000 years ago to present) age deposits accumulated as the result of stream processes on low-lying river beds, flood plains and alluvial fans. Deposits are composed of sandy cobble gravel upstream grading to sandy pebble gravel downstream and typically contain no pedogenic clay. Gravel deposits underlie the flood plain of the Boise River to depths of 23-35 feet and overlie a surface cut by the river into earlier Tertiary basin-fill sediments.

General Site Characteristics

This proposed development consists of approximately 3.5 acres of relatively level terrain. Throughout the majority of the site, surficial soils consist of silt-sand mixtures. Vegetation primarily consists of mature trees and landscape grasses; however, bunchgrass and other native weed and grass varieties typical of arid to semi-arid environments were also present.

Regional drainage is north toward the Boise River. Storm water drainage for the site is achieved by both sheet runoff and percolation through surficial soils. Runoff predominates for the paved areas while percolation prevails across the unpaved areas. From the south and east, intermittent off-site storm water may drain onto the project site. Storm water drainage collection and retention systems were not noted on the project site, but are planned to be constructed as part of the development.

Regional Site Climatology and Geochemistry

According to the Western Regional Climate Center, the average precipitation for Treasure Valley is on the order of 10 to 12 inches per year, with an annual snowfall of approximately 20 inches and a range from 3 to 49 inches. The monthly mean daily temperatures range from 21° F to 95° F with daily extremes ranging from -25° F to 111° F. Winds are generally from the northwest or southeast with an annual average wind speed of approximately 9 miles per hour (mph) with a maximum of 62 mph. Soils and sediments in the area are primarily derived from siliceous materials and exhibit low electro-chemical potential for corrosion of metals or concretes. Local aggregates are generally appropriate for Portland cement and lime cement mixtures. Surface waters, groundwaters, and soils in the region typically have pH levels ranging from 7.2 to 8.2.

Geoseismic Setting

Soils on site are classed as Site Class D in accordance with Chapter 20 of the American Society of Civil Engineers (ASCE) publication ASCE/SEI 7-10. Structures constructed on this site should be designed per IBC requirements for such a seismic classification. Our investigation did not reveal hazards resulting from potential earthquake motions including: slope instability, liquefaction, and surface rupture caused by faulting or lateral spreading. Incidence and anticipated acceleration of seismic activity in the area is low.

SOILS EXPLORATION

Exploration and Sampling Procedures

Field exploration conducted to determine engineering characteristics of subsurface materials included a reconnaissance of the project site and investigation by test pit. Test pit sites were located in the field by means of visual approximation from on-site features or known locations and are presumed to be accurate to within a few feet. Upon completion of investigation, each test pit was backfilled with loose excavated materials. Re-excavation and compaction of these test pit areas are required prior to construction of overlying structures.

In addition, samples were obtained from representative soil strata encountered. Samples obtained have been visually classified in the field by professional staff, identified according to test pit number and depth, placed in sealed containers, and transported to our laboratory for additional testing. Subsurface materials have been described in detail on logs provided in the **Appendix**. Results of field and laboratory tests are also presented on these logs. MTI recommends that these logs **not** be used to estimate fill material quantities.

Laboratory Testing Program

Along with our field investigation, a supplemental laboratory testing program was conducted to determine additional pertinent engineering characteristics of subsurface materials necessary in an analysis of the anticipated behavior of the proposed structures. Laboratory tests were conducted in accordance with current applicable American Society for Testing and Materials (ASTM) specifications, and results of these tests are to be found on the accompanying logs located in the **Appendix**. The laboratory testing program for this report included: Atterberg Limits Tests - ASTM D4318 and Grain Size Analysis - ASTM C117/C136.

Soil and Sediment Profile

The profile below represents a generalized interpretation for the project site. Note that on site soils strata, encountered between test pit locations, may vary from the individual soil profiles presented in the logs, which can be found in the **Appendix**.

The materials encountered during exploration were quite typical for the geologic area mapped as Alluvium of Boise River. Surficial soils were predominately sandy silts and silty sands. Sandy silts were primarily brown, slightly moist, very stiff to hard, and contained fine-grained sand. Silty sands were light brown to brown, slightly moist, medium dense, and contained fine to medium-grained sand. Organic materials were generally encountered to depths of roughly 1.5 feet bgs, though some tree roots were encountered to depths of up to 5.3 feet bgs.

Beneath the surficial silt-sand mixtures, poorly graded gravel with sand sediments were encountered. These gravels were most often classified as tan to light brown, dry to saturated, and medium dense. Fine to coarse-grained sand, fine to coarse gravels, and 10-inch-minus cobbles were encountered throughout this horizon.

Competency of test pit walls varied little across the site. In general, fine grained soils remained stable while more granular sediments readily sloughed. However, moisture contents will also affect wall competency with saturated soils having a tendency to readily slough when under load and unsupported.

Volatile Organic Scan

No environmental concerns were identified prior to commencement of the investigation. Therefore, soils obtained during on-site activities were not assessed for volatile organic compounds by portable photoionization detector. Samples obtained during our exploration activities exhibited no odors or discoloration typically associated with this type contamination. Groundwater encountered did not exhibit obvious signs of contamination.

SITE HYDROLOGY

Existing surface drainage conditions are defined in the **General Site Characteristics** section. Information provided in this section is limited to observations made at the time of the investigation. Either regional or local ordinances may require information beyond the scope of this report.

Groundwater

During this field investigation, groundwater was encountered in test pits at depths ranging from 8.0 to 8.1 feet bgs. Soil moistures in the test pits were generally dry to slightly moist within surficial silt-sand mixtures. Within the poorly graded gravels, soil moistures graded from dry to saturated as the water table was approached and penetrated. A 1-inch water service line was encountered within this horizon along the southeast end of test pit 3, at a depth of 1.8 feet bgs. The broken water line affected natural moisture contents within the test pit and also prevented determination of whether groundwater was encountered.

In the vicinity of the project site, groundwater levels are controlled in large part by the stage and flow of the Boise River. Maximum groundwater elevations likely occur during late spring to early summer runoff season. During previous investigations performed throughout 2004 to 2011 within approximately ½-mile of the project site, groundwater was encountered within numerous test pits at depths ranging from 5.8 to 9.4 feet bgs.

Based on evidence of this investigation and background knowledge of the area, MTI estimates groundwater depths to remain greater than approximately 5 feet bgs throughout the year. Since this is an estimated depth and seasonal groundwater levels fluctuate, actual levels should be confirmed by periodic groundwater data collected from a piezometer installed in test pit 3. If desired, MTI is available to perform this monitoring.

Soil Infiltration Rates

Soil permeability, which is a measure of the ability of a soil to transmit a fluid, was not tested in the field. Given the absence of direct measurements, for this report an estimation of infiltration is presented using generally recognized values for each soil type and gradation. Of soils comprising the generalized soil profile for this study, sandy silt soils will commonly exhibit infiltration rates from 2 to 4 inches per hour. Silty sand sediments usually display rates of 4 to 8 inches per hour. Poorly graded gravel sediments typically exhibit infiltration values in excess of 12 inches per hour. Infiltration testing is generally not required within these sediments because of their free-draining nature.

It is recommended that infiltration facilities constructed on the site be extended into native poorly graded gravel with sand sediments. Excavation depths ranging from roughly 2 to 4 feet bgs should be anticipated to expose these poorly graded gravel with sand sediments. Because of the high soil permeability, ASTM C33 filter sand, or equivalent, should be incorporated into design of infiltration facilities. An infiltration rate of 8 inches per hour should be used in design. Actual infiltration rates should be confirmed at the time of construction.

FOUNDATION, SLAB, AND PAVEMENT DISCUSSION AND RECOMMENDATIONS

Various foundation types have been considered for support of the proposed structures. Two requirements must be met in the design of foundations. First, the applied bearing stress must be less than the ultimate bearing capacity of foundation soils to maintain stability. Second, total and differential settlement must not exceed an amount that will produce an adverse behavior of the superstructure. Allowable settlement is usually exceeded before bearing capacity considerations become important; thus, allowable bearing pressure is normally controlled by settlement considerations.

Considering subsurface conditions and the proposed construction, it is recommended that the structures be founded upon conventional spread footings and continuous wall footings. Total settlements should not exceed 1 inch if the following design and construction recommendations are observed.

Foundation Design Recommendations

Based on data obtained from the site and test results from various laboratory tests performed, MTI recommends following guidelines for the net allowable soils bearing capacity:

Soil Bearing Capacity

Footing Depth	ASTM D1557 Subgrade Compaction	Net Allowable Soil Bearing Capacity
Footings must bear on competent, undisturbed, native poorly graded gravel with sand sediments or compacted structural fill. Existing sandy silt and silty sand soils, organic materials, and fill materials (if encountered) must be completely removed from below foundation elements. ¹ Excavation depths ranging from 2 to 4 feet bgs should be anticipated to expose proper bearing soils. Additional excavation should be expected in areas where large tree roots are present.	Not Required for Native Soil 95% for Structural Fill	3,500 lbs/ft ² A $\frac{1}{3}$ increase is allowable for short-term loading, which is defined by seismic events or designed wind speeds.

¹It will be required for MTI personnel to verify the bearing soil suitability for each structure at the time of construction.

A sliding frictional coefficient value of 0.45 should be used for footings bearing on native gravel sediments or granular structural fill. A passive lateral earth pressure of 337 pounds per square foot (psf) should be used for sandy silt or silty sand (ML/SM) soils. For compacted native gravel sediments or sandy gravel fill, a passive lateral earth pressure of 496 psf should be used.

Footings should be proportioned to meet either the stated soil bearing capacity or the 2012 IBC minimum requirements. Total settlement should be limited to approximately 1 inch, and differential settlement should be limited to approximately $\frac{1}{2}$ inch. Objectionable soil types encountered at the bottom of footing excavations should be removed and replaced with structural fill. Excessively loose or soft areas that are encountered in the footing subgrade will require over-excavation and backfilling with structural fill. To minimize the effects of slight differential movement that may occur because of variations in character of supporting soils and seasonal moisture content, MTI recommends continuous footings be suitably reinforced to make them as rigid as possible. For frost protection, the bottom of external footings should be 30 inches below finished grade.

Floor Slab-on-Grade

Uncontrolled fill should be expected in portions of the site where structures, utility lines, and pavement are or were present. MTI recommends that these fill soils be excavated to a sufficient depth to expose competent, native soils or to a minimum depth of 1½ feet below finished subgrade. MTI personnel must be present during excavation to identify these materials.

Organic, loose, or obviously compressive materials must be removed prior to placement of concrete floors or floor-supporting fill. In addition, the remaining subgrade should be treated in accordance with guidelines presented in the **Earthwork** section. Areas of excessive yielding should be excavated and backfilled with structural fill. Fill used to increase the elevation of the floor slab should meet requirements detailed in the **Structural Fill** section. Fill materials must be compacted to a minimum 95 percent of maximum density as determined by ASTM D1557.

A free-draining granular mat (drainage fill course) should be provided below slabs-on-grade. This should be a minimum of 4 inches in thickness and properly compacted. The mat should consist of a sand and gravel mixture, complying with Idaho Standards for Public Works Construction (ISPWC) specifications for ¾-inch (Type 1) crushed aggregate. A moisture-retarder should be placed beneath floor slabs to minimize potential ground moisture effects on moisture-sensitive floor coverings. The moisture-retarder should be at least 15-mil in thickness and have a permeance of less than 0.01 US perms as determined by ASTM E96. Placement of the moisture-retarder will require special consideration with regard to effects on the slab-on-grade. The granular mat should be compacted to no less than 95 percent of maximum density as determined by ASTM D1557. Upon request, MTI can provide further consultation regarding installation.

Recommended Pavement Sections

MTI has made assumptions for traffic loading variables based on the character of the proposed construction. The client shall review and understand these assumptions to make sure they reflect intended use and loading of pavements both now and in the future. Based on experience with soils in the region, a subgrade California Bearing Ratio (CBR) value of 5 has been assumed for near-surface silty sand sediments on site. The following are minimum thickness requirements for assured pavement function. Depending on site conditions, additional work, e.g. soil preparation, may be required to support construction equipment.

Flexible Pavement Sections

The American Association of State Highway and Transportation Officials (AASHTO) design method has been used to calculate the following pavement sections. Calculation sheets provided in the **Appendix** indicate the soils constant, traffic loading, traffic projections, and material constants used to calculate the pavement sections. MTI recommends that materials used in the construction of asphaltic concrete pavements meet requirements of the ISPWC Standard Specification for Highway Construction. Construction of the pavement section should be in accordance with these specifications and should adhere to guidelines recommended in the section on **Construction Considerations**.

AASHTO Flexible Pavement Specifications

Pavement Section Component¹	Driveways and Parking No Truck Access	Driveways and Parking Truck Access
Asphaltic Concrete	2.5 Inches	3.0 Inches
Crushed Aggregate Base	4.0 Inches	4.0 Inches
Structural Subbase	8.0 Inches	12.0 Inches
Compacted Subgrade	Not Required	Not Required

¹It will be required for MTI personnel to verify subgrade competency at the time of construction.

- Asphaltic Concrete: Asphalt mix design shall meet the requirements of ISPWC, Section 810 Class III plant mix. Materials shall be placed in accordance with ISPWC Standard Specifications for Highway Construction.
- Aggregate Base: Material complying with ISPWC Standards for Crushed Aggregate Materials.
- Structural Subbase: Material should comply with the requirements detailed in the **Structural Fill** section of this report except that the maximum material diameter is no more than $\frac{2}{3}$ the component thickness.

Common Pavement Section Construction Issues

The subgrade upon which above pavement sections are to be constructed must be properly stripped, inspected, and proof-rolled. Proof rolling of subgrade soils should be accomplished using a heavy rubber-tired, fully loaded, tandem-axle dump truck or equivalent. Verification of subgrade competence by MTI personnel at the time of construction is required. Fill materials on the site must demonstrate the indicated compaction prior to placing material in support of the pavement section. MTI anticipates that pavement areas will be subjected to moderate traffic. MTI does not anticipate pumping material to become evident during compaction, but subgrade silty soils near and above optimum moisture contents may tend to pump. Pumping or soft areas must be removed and replaced with structural fill.

Fill material and aggregates in support of the pavement section must be compacted to no less than 95 percent of the maximum dry density as determined by ASTM D698 for flexible pavements and by ASTM D1557 for rigid pavements. If a material placed as a pavement section component cannot be tested by usual compaction testing methods, then compaction of that material must be approved by observed proof rolling. Minor deflections from proof rolling for flexible pavements are allowable. Deflections from proof rolling of rigid pavement support courses should not be visually detectable.

MTI recommends that rigid concrete pavement be provided for heavy garbage receptacles. This will eliminate damage caused by the considerable loading transferred through the small steel wheels onto asphaltic concrete. Rigid concrete pavement should consist of Portland Cement Concrete Pavement (PCCP) generally adhering to ITD specifications for Urban Concrete. PCCP should be 6 inches thick on a 4-inch drainage fill course (see **Floor Slab-on-Grade** section), and should be reinforced with welded wire fabric. Control joints must be on 12-foot centers or less.

CONSTRUCTION CONSIDERATIONS

Recommendations in this report are based upon structural elements of the project being founded on competent, native poorly graded gravel with sand sediments or compacted structural fill. Structural areas should be stripped to an elevation that exposes these soil types.

Earthwork

Excessively organic soils, deleterious materials, or disturbed soils generally undergo high volume changes when subjected to loads, which is detrimental to subgrade behavior in the area of pavements, floor slabs, structural fills, and foundations. Mature trees, landscape grasses, and other weeds and grasses with associated root systems were noted at the time of our investigation. It is recommended that organic or disturbed soils, if encountered, be removed to depths of 1 foot (minimum), and wasted or stockpiled for later use. Stripping depths should be adjusted in the field to assure that the entire root zone or disturbed zone or topsoil are removed prior to placement and compaction of structural fill materials. Exact removal depths should be determined during grading operations by MTI personnel, and should be based upon subgrade soil type, composition, and firmness or soil stability. Existing onsite structures will be demolished as part of the project. All debris and fill material associated with demolition activities must be completely removed. The resultant excavation must be backfilled with structural fill materials as defined in the **Structural Fill** section.

If underground storage tanks, underground utilities, wells, or septic systems are discovered during construction activities, they must be decommissioned then removed or abandoned in accordance with governing Federal, State, and local agencies. Excavations developed as the result of such removal must be backfilled with structural fill materials as defined in the **Structural Fill** section.

MTI should oversee subgrade conditions (i.e., moisture content) as well as placement and compaction of new fill (if required) after native soils are excavated to design grade. Recommendations for structural fill presented in this report can be used to minimize volume changes and differential settlements that are detrimental to the behavior of footings, pavements, and floor slabs. Sufficient density tests should be performed to properly monitor compaction. For structural fill beneath building structures, one in-place density test per lift for every 5,000 square feet is recommended. In parking and driveway areas, this can be decreased to one test per lift for every 10,000 square feet.

Dry Weather

If construction is to be conducted during dry seasonal conditions, many problems associated with soft soils may be avoided. However, some rutting of subgrade soils may be induced by shallow groundwater conditions related to springtime runoff or irrigation activities during late summer through early fall. Problems may also arise because of lack of moisture in native and fill soils at time of placement. This will require the addition of water to achieve near-optimum moisture levels. Low-cohesion soils exposed in excavations may become friable, increasing chances of sloughing or caving. Measures to control excessive dust should be considered as part of the overall health and safety management plan.

Wet Weather

If construction is to be conducted during wet seasonal conditions (commonly from mid-November through May), problems associated with soft soils must be considered as part of the construction plan. During this time of year, fine-grained soils such as silts and clays will become unstable with increased moisture content, and eventually deform or rut. Additionally, constant low temperatures reduce the possibility of drying soils to near optimum conditions.

Frozen Subgrade Soils

Prior to placement of structural fill materials or foundation elements, frozen subgrade soils must be allowed to thaw or be stripped to depths that expose non-frozen soils and wasted or stockpiled for later use. Stockpiled materials must be allowed to thaw and return to near-optimal conditions prior to use as structural fill.

Structural Fill

Soils recommended for use as structural fill are those classified as GW, GP, SW, and SP in accordance with the Unified Soil Classification System (USCS) (ASTM D2487). Use of silty soils (USCS designation of GM, SM, and ML) as structural fill may be acceptable. However, use of silty soils (GM, SM, and ML) as structural fill below footings is prohibited. These materials require very high moisture contents for compaction and require a long time to dry out if natural moisture contents are too high and may also be susceptible to frost heave under certain conditions. Therefore these materials can be quite difficult to work with as moisture content, lift thickness, and compactive effort becomes difficult to control. If silty soil is used for structural fill, lift thicknesses should not exceed 6 inches (loose), and fill material moisture must be closely monitored at both the working elevation and the elevations of materials already placed. Following placement, silty soils must be protected from degradation resulting from construction traffic or subsequent construction.

Recommended granular structural fill materials, those classified as GW, GP, SW, and SP, should consist of a 6-inch minus select, clean, granular soil with no more than 50 percent oversize (greater than ¾-inch) material and no more than 12 percent fines (passing No. 200 sieve). These fill materials should be placed in layers not to exceed 12 inches in loose thickness. Prior to placement of structural fill materials, surfaces must be prepared as outlined in the **Construction Considerations** section. Structural fill material should be moisture-conditioned to achieve optimum moisture content prior to compaction. For structural fill below footings, areas of compacted backfill must extend outside the perimeter of the footing for a distance equal to the thickness of fill between the bottom of foundation and underlying soils, or 5 feet, whichever is less. All fill materials must be monitored during placement and tested to confirm compaction requirements, outlined below, have been achieved.

Each layer of structural fill must be compacted, as outlined below:

- Below Structures and Rigid Pavements: A minimum of 95 percent of the maximum dry density as determined by ASTM D1557.
- Below Flexible Pavements: A minimum of 92 percent of the maximum dry density as determined by ASTM D1557 or 95 percent of the maximum dry density as determined by ASTM D698.

The ASTM D1557 test method must be used for samples containing up to 40 percent oversize (greater than ¾-inch) particles. If material contains more than 40 percent but less than 50 percent oversize particles, compaction of fill must be confirmed by proof rolling each lift with a 10-ton vibratory roller (or equivalent) until the maximum density has been achieved. Density testing must be performed after each proof rolling pass until the in-place density test results indicate a drop (or no increase) in the dry density, defined as the maximum density or "break over" point. The number of required passes should be used as the requirement on the remainder of fill placement. Material should contain sufficient fines to fill void spaces, and must not contain more than 50 percent oversize particles.

Backfill of Walls

Backfill materials must conform to the requirements of structural fill, as defined in this report. For wall heights greater than 2.5 feet, the maximum material size should not exceed 4 inches in diameter. Placing oversized material against rigid surfaces interferes with proper compaction, and can induce excessive point loads on walls. Backfill shall not commence until the wall has gained sufficient strength to resist placement and compaction forces. Further, retaining walls above 2.5 feet in height shall be backfilled in a manner that will limit the potential for damage from compaction methods and/or equipment. It is recommended that only small hand-operated compaction equipment be used for compaction of backfill within a horizontal distance equal to the height of the wall, measured from the back face of the wall.

Backfill should be compacted in accordance with the specifications for structural fill, except in those areas where it is determined that future settlement is not a concern, such as planter areas. In nonstructural areas, backfill must be compacted to a firm and unyielding condition.

Excavations

Shallow excavations that do not exceed 4 feet in depth may be constructed with side slopes approaching vertical. Below this depth, it is recommended that slopes be constructed in accordance with Occupational Safety and Health Administration (OSHA) regulations, section 1926, subpart P. Based on these regulations, on-site soils are classified as type "C" soil, and as such, excavations within these soils should be constructed at a maximum slope of 1½ foot horizontal to 1 foot vertical (1½H:1V) for excavations up to 20 feet in height. Excavations in excess of 20 feet will require additional analysis. Note that these slope angles are considered stable for short-term conditions only, and will not be stable for long-term conditions.

During our subsurface exploration, sloughing of native granular sediments from test pit sidewalls was observed, particularly after penetration of the water table. For deep excavations, native granular sediments cannot be expected to remain in position. These materials are prone to failure and may collapse, thereby, undermining upper soils layers. This is especially true when excavations approach depths near the water table. Care must be taken to ensure that excavations are properly backfilled in accordance with procedures outlined in this report.

Groundwater Control

Groundwater was encountered during the investigation but is anticipated to be below the depth of most construction. If recommended, excavations below the water table will require a dewatering program. Dewatering will be required prior to placement of fill materials. Placement of concrete can be accomplished through water by the use of a tremie. It may be possible to discharge dewatering effluent to remote portions of the site, to a sump, or to a pit. This will essentially recycle effluent, thus eliminating the need to enter into agreements with local drainage authorities. Should the scope of the proposed project change, MTI should be contacted to provide more detailed groundwater control measures.

Special precautions may be required for control of surface runoff and subsurface seepage. It is recommended that runoff be directed away from open excavations. Silty soils may become soft and pump if subjected to excessive traffic during time of surface runoff. Pondered water in construction areas should be drained through methods such as trenching, sloping, crowning grades, nightly smooth drum rolling, or installing a French drain system. Additionally, temporary or permanent driveway sections should be constructed if extended wet weather is forecasted.

GENERAL COMMENTS

When plans and specifications are complete, or if significant changes are made in the character or location of the proposed development, consultation with MTI should be arranged as supplementary recommendations may be required. Suitability of subgrade soils and compaction of structural fill materials must be verified by MTI personnel prior to placement of structural elements. Additionally, monitoring and testing should be performed to verify that suitable materials are used for structural fill and that proper placement and compaction techniques are utilized.

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APPENDICES

ACRONYM LIST

AASHTO:	American Association of State Highway and Transportation Officials
ACHD:	Ada County Highway District
ACI	American Concrete Institute
ASCE	American Society of Civil Engineers
ASTM:	American Society for Testing and Materials
bgs:	below ground surface
CBR:	California Bearing Ratio
D:	natural dry unit weight, pcf
ESAL	Equivalent Single Axle Load
GS:	grab sample
IBC:	International Building Code
IDEQ	Idaho Department of Environmental Quality
ISPWC:	Idaho Standards for Public Works Construction
ITD:	Idaho Transportation Department
LL:	Liquid Limit
M:	water content
MSL:	mean sea level
N:	Standard "N" penetration: blows per foot, Standard Penetration Test
NP:	nonplastic
OSHA	Occupational Safety and Health Administration
PCCP:	Portland Cement Concrete Pavement
PERM:	vapor permeability
PI:	Plasticity Index
PID:	photoionization detector
PVC:	polyvinyl chloride
Qc:	cone penetrometer value, unconfined compressive strength, psi
Qp:	Penetrometer value, unconfined compressive strength, tsf
Qu:	Unconfined compressive strength, tsf
RMR	Rock Mass Rating
RQD	Rock Quality Designation
R-Value	Resistance Value
SPT:	Standard Penetration Test (140:pound hammer falling 30 in. on a 2:in. split spoon)
USCS:	Unified Soil Classification System
USDA:	United States Department of Agriculture
UST:	underground storage tank
V:	vane value, ultimate shearing strength, tsf

GEOTECHNICAL GENERAL NOTES

RELATIVE DENSITY AND CONSISTENCY CLASSIFICATION			
Coarse-Grained Soils	SPT Blow Counts (N)	Fine-Grained Soils	SPT Blow Counts (N)
Very Loose:	< 4	Very Soft:	< 2
Loose:	4-10	Soft:	2-4
Medium Dense:	10-30	Medium Stiff:	4-8
Dense:	30-50	Stiff:	8-15
Very Dense:	>50	Very Stiff:	15-30
		Hard:	>30

Moisture Content	
Description	Field Test
Dry	Absence of moisture, dusty, dry to touch
Moist	Damp but not visible moisture
Wet	Visible free water, usually soil is below water table

Cementation	
Description	Field Test
Weakly	Crumbles or breaks with handling or slight finger pressure
Moderately	Crumbles or breaks with considerable finger pressure
Strongly	Will not crumble or break with finger pressure

PARTICLE SIZE					
Boulders:	>12 in.	Coarse-Grained Sand:	5 to 0.6 mm	Silts:	0.075 to 0.005 mm
Cobbles:	12 to 3 in.	Medium-Grained Sand:	0.6 to 0.2 mm	Clays:	<0.005 mm
Gravel:	3 in. to 5 mm	Fine-Grained Sand:	0.2 to 0.075 mm		

UNIFIED SOIL CLASSIFICATION SYSTEM			
Major Divisions		Symbol	Soil Descriptions
Coarse-Grained Soils <50% passes No.200 sieve	Gravel & Gravelly Soils <50% coarse fraction passes No.4 sieve	GW	Well-graded gravels; gravel/sand mixtures with little or no fines
		GP	Poorly-graded gravels; gravel/sand mixtures with little or no fines
		GM	Silty gravels; poorly-graded gravel/sand/silt mixtures
		GC	Clayey gravels; poorly-graded gravel/sand/clay mixtures
	Sand & Sandy Soils >50% coarse fraction passes No.4 sieve	SW	Well-graded sands; gravelly sands with little or no fines
		SP	Poorly-graded sands; gravelly sands with little or no fines
		SM	Silty sands; poorly-graded sand/gravel/silt mixtures
		SC	Clayey sands; poorly-graded sand/gravel/clay mixtures
Fine Grained Soils >50% passes No.200 sieve	Silts & Clays LL < 50	ML	Inorganic silts; sandy, gravelly or clayey silts
		CL	Lean clays; inorganic, gravelly, sandy, or silty, low to medium-plasticity clays
		OL	Organic, low-plasticity clays and silts
	Silts & Clays LL > 50	MH	Inorganic, elastic silts; sandy, gravelly or clayey elastic silts
		CH	Fat clays; high-plasticity, inorganic clays
		OH	Organic, medium to high-plasticity clays and silts
Highly Organic Soils		PT	Peat, humus, hydric soils with high organic content

GEOTECHNICAL INVESTIGATION TEST PIT LOGS

 Test Pit Log #: **TP-1** Date Advanced: **23 Jan 2014** Logged by: **Monica Saculles, P.E.**

 Excavated by: **Struckman's Backhoe Service** Location: **See Site Map Plates**

 Depth to Water Table: **8.0 Feet bgs**

 Total Depth: **8.7 Feet bgs**

Depth (Feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (Feet bgs)	Qp	Lab Test ID
0.0-1.5	Sandy Silt (ML): <i>Brown, slightly moist, very stiff to hard, with fine-grained sand. --Organic material present throughout, with limited tree roots present to a depth of 2.2 feet bgs.</i>			4.0-4.5+	
1.5-2.2	Silty Sand (SM): <i>Light brown, slightly moist, medium dense, with fine to medium-grained sand.</i>				
2.2-8.7	Poorly Graded Gravel with Sand (GP): <i>Tan to light brown, dry to saturated, medium dense, with fine to coarse-grained sand, fine to coarse gravel, and 8-inch-minus rounded to sub-rounded cobbles.</i>				

 Test Pit Log #: **TP-2** Date Advanced: **23 Jan 2014** Logged by: **Monica Saculles, P.E.**

 Excavated by: **Struckman's Backhoe Service** Location: **See Site Map Plates**

 Depth to Water Table: **8.1 Feet bgs**

 Total Depth: **8.9 Feet bgs**

Depth (Feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (Feet bgs)	Qp	Lab Test ID
0.0-1.0	Sandy Silt (ML): <i>Brown, slightly moist, very stiff, with fine-grained sand. --Organic material present to a depth of 1.5 feet bgs, with tree roots present to a depth of 5.3 feet bgs.</i>			3.25-3.5	
1.0-3.5	Silty Sand (SM): <i>Light brown, slightly moist, medium dense, with fine to medium-grained sand.</i>				
3.5-8.9	Poorly Graded Gravel with Sand (GP): <i>Tan to light brown, dry to saturated, medium dense, with fine to coarse-grained sand, fine to coarse gravel, and 10-inch-minus rounded to sub-rounded cobbles.</i>				

Environmental Services Geotechnical Engineering Construction Materials Testing Special Inspections

GEOTECHNICAL INVESTIGATION TEST PIT LOG

Test Pit Log #: **TP-3** Date Advanced: **23 Jan 2014** Logged by: **Monica Saculles, P.E.**

Excavated by: **Struckman's Backhoe Service**

Location: **See Site Map Plates**

Depth to Water Table: **Unknown**

Total Depth: **7.9 Feet bgs**

Notes: **Piezometer installed to 7.9 feet bgs.**

Depth (Feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (Feet bgs)	Qp	Lab Test ID
0.0-1.5	Silty Sand (SM): <i>Brown, slightly moist, medium dense, with fine-grained sand. --Organic material present throughout.</i>	GS	0.5-0.6		A
1.5-7.9	Poorly Graded Gravel with Sand (GP): <i>Tan to light brown, dry to saturated, medium dense, with fine to coarse-grained sand, fine to coarse gravel, and 10-inch-minus rounded to sub-rounded cobbles. --A 1-inch water service line was encountered at a depth of 1.8 feet bgs in the southeast end of the test pit. This broken water line affected natural moisture contents and also prevented determination of whether groundwater was encountered.</i>				

Lab Test ID	M	LL	PI	Sieve Analysis				
				#4	#10	#40	#100	#200
-	%	-	-					
A	9.8	NP	NP	98	98	92	61	42.1

AASHTO PAVEMENT THICKNESS DESIGN PROCEDURES
Pavement Section Design Location: Trailwinds Development, No Truck Access

Average Daily Traffic Count:	400	All Lanes & Both Directions
Design Life:	20	Years
Percent of Traffic in Design Lane:	50%	
Terminal Serviceability Index (Pt):	2.5	
Level of Reliability:	95	
Subgrade CBR Value:	5	Subgrade Mr: 7,500

Calculation of Design-18 kip ESALs

	Daily Traffic	Growth Rate	Load Factors	Design ESALs
Passenger Cars:	130	2.0%	0.0008	922
Buses:	0	2.0%	0.6806	0
Panel & Pickup Trucks:	65	2.0%	0.0122	7,033
2-Axle, 6-Tire Trucks:	4	2.0%	0.1890	6,705
Concrete Trucks:	1.0	2.0%	4.4800	39,731
Dump Trucks:	0	2.0%	3.6300	0
Tractor Semi Trailer Trucks:	0	2.0%	2.3719	0
Double Trailer Trucks:	0	2.0%	2.3187	0
Heavy Tractor Trailer Combo Trucks:	0	2.0%	2.9760	0
Average Daily Traffic in Design Lane:	200			

Total Design Life 18-kip ESALs: 54,391

Actual Log (ESALs): 4.736

Trial SN: 2.29

Trial Log (ESALs): 4.745

Pavement Section Design SN: 2.41

	Design Depth Inches	Structural Coefficient	Drainage Coefficient
Asphaltic Concrete:	2.50	0.42	n/a
Asphalt-Treated Base:	0.00	0.25	n/a
Cement-Treated Base:	0.00	0.17	n/a
Crushed Aggregate Base:	4.00	0.14	1.0
Pit Run Aggregate Subgrade:	8.00	0.10	1.0
Special Aggregate Subgrade:	0.00	0.09	0.9

AASHTO PAVEMENT THICKNESS DESIGN PROCEDURES
Pavement Section Design Location: Trailwinds Development, Truck Access

Average Daily Traffic Count:	400	All Lanes & Both Directions
Design Life:	20	Years
Percent of Traffic in Design Lane:	50%	
Terminal Seviceability Index (Pt):	2.5	
Level of Reliability:	95	
Subgrade CBR Value:	5	Subgrade Mr: 7,500

Calculation of Design-18 kip ESALs

	Daily Traffic	Growth Rate	Load Factors	Design ESALs
Passenger Cars:	110	2.0%	0.0008	780
Buses:	5	2.0%	0.6806	30,180
Panel & Pickup Trucks:	64	2.0%	0.0122	6,925
2-Axle, 6-Tire Trucks:	15	2.0%	0.1890	25,142
Concrete Trucks:	1.0	2.0%	4.4800	39,731
Dump Trucks:	2	2.0%	3.6300	64,386
Tractor Semi Trailer Trucks:	2	2.0%	2.3719	42,071
Double Trailer Trucks:	1	2.0%	2.3187	20,563
Heavy Tractor Trailer Combo Trucks:	0	2.0%	2.9760	0
Average Daily Traffic in Design Lane:	200			

Total Design Life 18-kip ESALs: 229,778

Actual Log (ESALs): 5.361

Trial SN: 2.90

Trial Log (ESALs): 5.362

Pavement Section Design SN: 3.02

	Design Depth Inches	Structural Coefficient	Drainage Coefficient
Asphaltic Concrete:	3.00	0.42	n/a
Asphalt-Treated Base:	0.00	0.25	n/a
Cement-Treated Base:	0.00	0.17	n/a
Crushed Aggregate Base:	4.00	0.14	1.0
Pit Run Aggregate Subgrade:	12.00	0.10	1.0
Special Aggregate Subgrade:	0.00	0.09	0.9

MAP NOTES:

- Delorme Street Atlas
- Not to Scale

LEGEND

Approximate Site Location



Trailwinds Development

Adams Street and 42nd Street
Garden City, ID

Modified from Delorme by: MHS

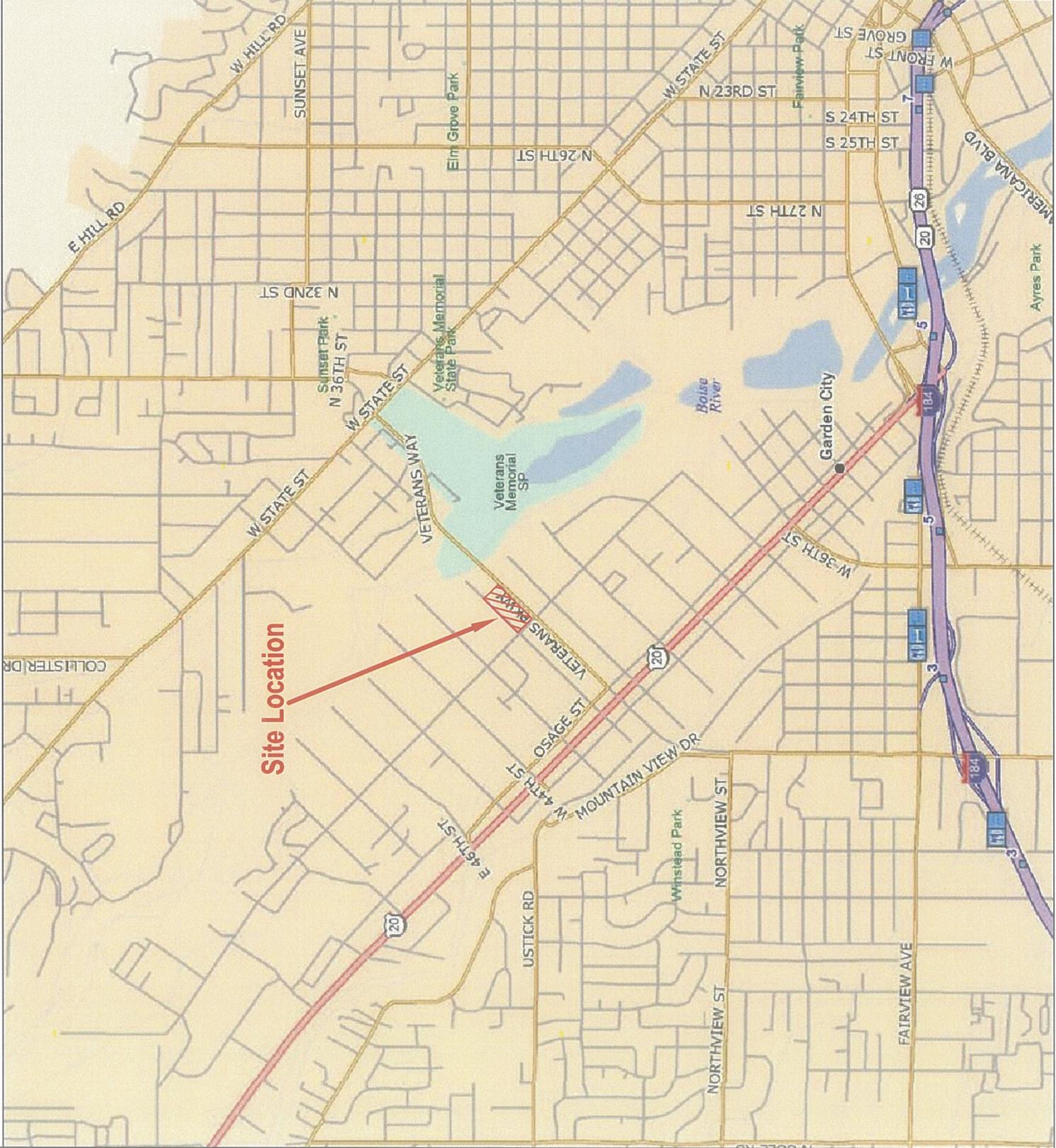
27 January 2014

Drawing: B140088g



**MATERIALS
TESTING &
INSPECTION**

2791 S. Victory View Way
Boise, ID 83709-2835
Phone: 208 376-4748
Fax: 208 922-6515
E-mail: mti@mti-id.com



Site Location

NOTES:

- Not to Scale

LEGEND

Approximate Site Boundary

Approximate MTI Test Pit Location

Approximate MTI Test Pit Location with Piezometer



Trailwinds Development

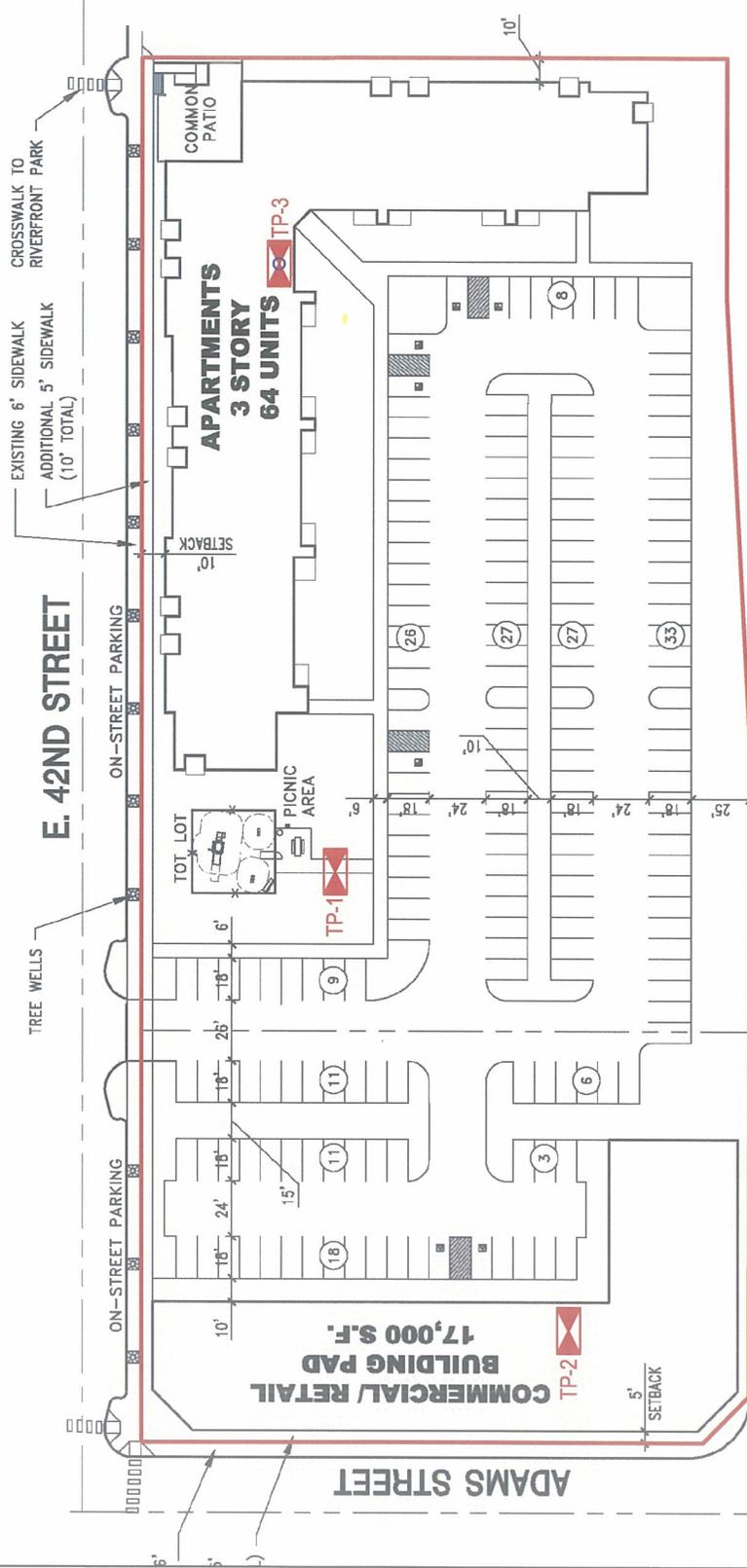
Adams Street and 42nd Street
Garden City, ID

Modified by: MHS
27 January 2014
Drawing: B140088g



**MATERIALS
TESTING &
INSPECTION**

Phone: 208 376-4748
Fax: 208 322-6515
E-mail: mit@mi-id.com



VETERANS MEMORIAL PARKWAY

Prepared for:

Garden City, Idaho

Storm Drainage Calculations

Parkway Station Garden City, Idaho

Prepared by:

ROCK SOLID CIVIL

270 N. 27th Street,
Suite 100

Boise, ID 83702

208.342.3277

May 31, 2016

Project No: 16-14



**ROCK SOLID
CIVIL**

Civil Engineering Land Development Consulting

Table of Contents

Narrative 2

Figure I: Drainage Tributary Area Map 3

Figure II: Facility Spreadsheet Calculations 5

Storm Drainage Calculations

Parkway Station

Narrative

The Parkway Station project is located in the north corner of E. 42nd St. and N. Adams St. in Garden City, Idaho. These calculations are for the onsite private Drainage Facility #1 through #7, prepared for the Parkway Station project.

See **Figure I** for the overall drainage map and its respective drainage facility location. All enclosed drainage facilities are private PaveDrain systems to manage the onsite stormwater discharges.

See **Figure II** for Facility Spreadsheet Calculations.

Figure I: Drainage Tributary Area Map

DESIGN FACTORS:
 1. ESTIMATED GW: 6' BGS. GW ELV=44.5 (50.5-6')
 2. DESIGN SOIL INFILTRATION RATE=8 IN/HR
 3. REQUIRED SEPARATION FROM BOTTOM OF DRAINAGE FACILITY TO SHGW: 3'
 4. APPROX SEWER DEPTH AT NORTH CORNER: 3' BGS (INV OUT: 47.50)



DRAINAGE FACILITY #6
PAVEDRAIN AREA: 100'L x 2'W
ROCK DEPTH: 2'D

DRAINAGE FACILITY #7
PAVEDRAIN AREA: 118'L x 3'W
ROCK DEPTH: 1.5'D

DRAINAGE FACILITY #5
PAVEDRAIN AREA: 130'L x 3'W
ROCK DEPTH: 1.5'D

DRAINAGE FACILITY #4
PAVEDRAIN AREA: 167'L x 4'W
ROCK DEPTH: 1.0'D

DRAINAGE FACILITY #3
PAVEDRAIN AREA: 130'L x 5'W
ROCK DEPTH: 1.5'D

DRAINAGE FACILITY #1
PAVEDRAIN AREA: 140'L x 4'W
ROCK DEPTH: 2'D

DRAINAGE FACILITY #2
PAVEDRAIN AREA: 140'L x 5'W
ROCK DEPTH: 1.5'D

BASIN #6
(5,702 SF)

BASIN #7
(9,317 SF)

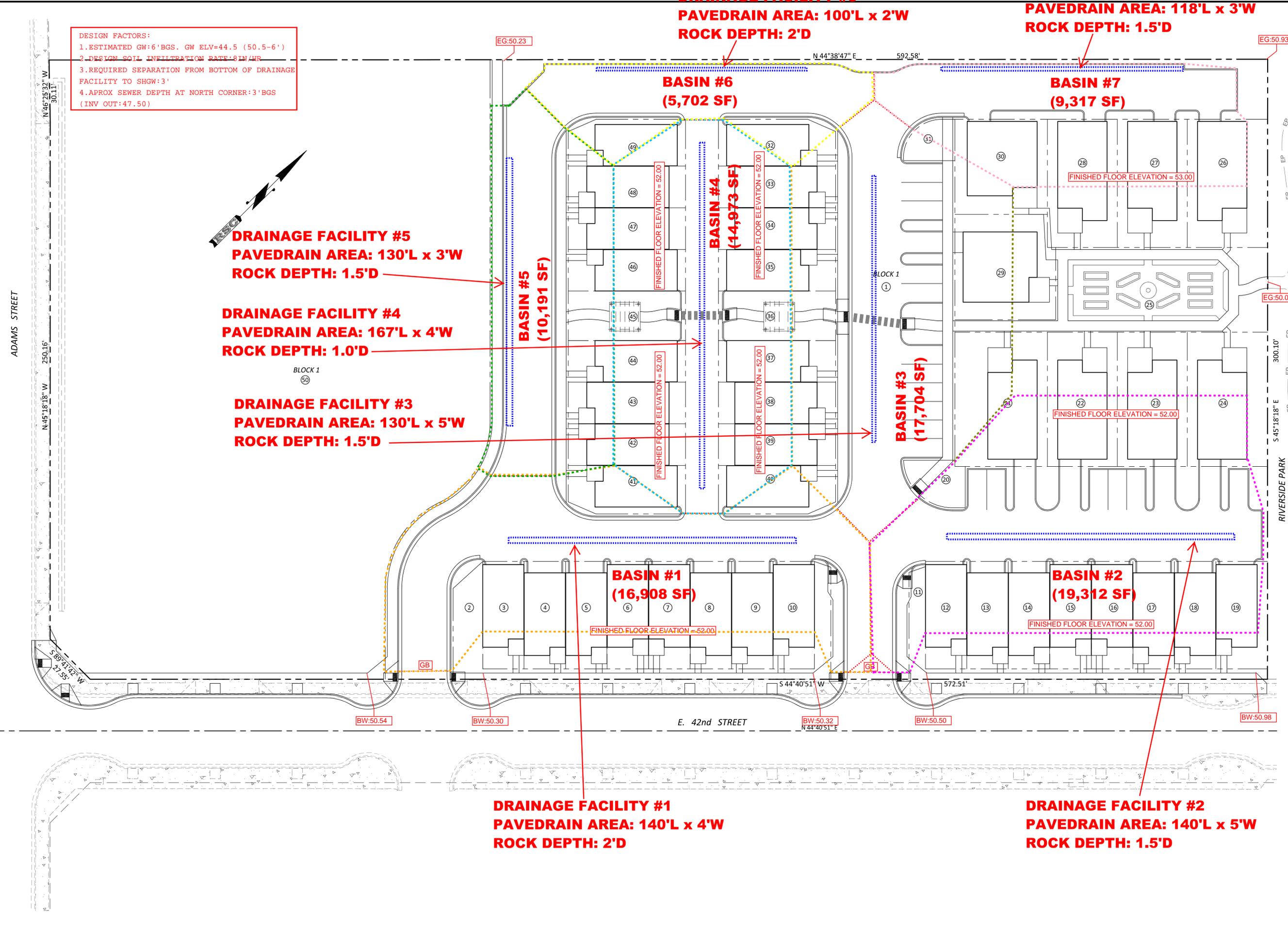
BASIN #5
(10,191 SF)

BASIN #4
(14,973 SF)

BASIN #3
(17,704 SF)

BASIN #1
(16,908 SF)

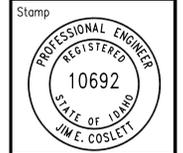
BASIN #2
(19,312 SF)



HUTCHISON SMITH ARCHITECTS
 HSA
 270 North 27th St. Boise, Idaho, 83702
 (208) 338-1212
 Fax (208) 338-0011

PROJECT: RSC 16-14
 FILE: Parkway DA.dwg
 DATE: Apr. 14, 2016
 DRAWN: JDF
 REVISIONS:

ROCK SOLID CIVIL
 Civil Engineering and Land Development Consulting
 270 North 27th Street, Boise, ID 83702
 Office Phone: 208.942.3277
 www.rocksolidcivil.com



MIXED USE RESIDENTIAL
 PARKWAY STATION
 E. 42nd ST
 DRAINAGE BASIN MAP

SHEET NO.
DA

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Figure II: Facility Spreadsheet Calculations

parkway_sd calcs.xls
Summary

DRAINAGE SUMMARY

Drainage Basin	Area (SF)	Drainage Facility	C-Factor
Basin #1	16,908	PaveDrain #1	0.65
Basin #2	19,312	PaveDrain #2	0.65
Basin #3	17,704	PaveDrain #3	0.65
Basin #4	14,973	PaveDrain #4	0.65
Basin #5	10,191	PaveDrain #5	0.65
Basin #6	5,702	PaveDrain #6	0.65
Basin #7	9,317	PaveDrain #7	0.65

PaveDrain Calcs

Project/Location **Basin #1**

Using Zone "A" IDF Curve

Return Period?		50
Drainage Area (acres):	Area in ft ²	16,908
	Area in Acres	0.39
Runoff Coefficient (c)		0.65
Percolation Rate	Inches/Hr	8 (per geotechnical recommendations)
Predevelopment Rate (if any)		cfs

Is there enough Percolation Area?	Enough Capacity?
YES	YES

Compute Peak Volume

Storm Duration		I	Q	Runoff Vol	Percolation Vol	PreDev. Vol	V _R Required Vol
Min	Hr	in/hr	cfs	ft ³	ft ³	ft ³	ft ³
10	0.17	2.61	0.66	395	62	0	333
30	0.50	1.43	0.36	649	187	0	463
	1	0.89	0.22	808	373	0	435
	2	0.53	0.13	963	747	0	216
	3	0.40	0.10	1,087	1,120	0	-33
	6	0.25	0.06	1,335	2,240	0	-905
	12	0.14	0.04	1,526	4,480	0	-2,954
	24	0.08	0.02	1,700	8,960	0	-7,260
Runoff Vol. (ft ³)	Percol. Vol. (ft ³)	Perc. Rt. (in/hr)	Perc. Rt. (ft/day)	Required Area (ft ²)	Enter Total Design Vol.		435
435	392	8	16	24.5			

Paver Length		140 FT	
Paver Width		4 FT	
Paver Cross Sectional Storage		0.33 SF	(PaveDrain Blocks Hold 1" of Water in the Arch)
Rock Length		140 FT	
Rock Width		4 FT	
Rock Depth		2 FT	
Rock Cross Sectional Area		8.00 SF	
Rock Cross Sectional Storage		3.20 SF	(40% Voids)
Perc Length		140 FT	
Perc Width		4 FT	

Vol. Available **495 CF**
Time to Drain **2.2 Hours**

PaveDrain Calcs

Project/Location **Basin #2**

Using Zone "A" IDF Curve

Return Period?		50
Drainage Area (acres):	Area in ft ²	19,312
	Area in Acres	0.44
Runoff Coefficient (c)		0.65
Percolation Rate	Inches/Hr	8
Predevelopment Rate (if any)		cfs

Is there enough Percolation Area?	Enough Capacity?
YES	YES

(per geotechnical recommendations)

Compute Peak Volume

Storm Duration		I	Q	Runoff Vol	Percolation Vol	PreDev. Vol	V _R Required Vol
Min	Hr	in/hr	cfs	ft ³	ft ³	ft ³	ft ³
10	0.17	2.61	0.75	451	78	0	374
30	0.50	1.43	0.41	742	233	0	508
	1	0.89	0.26	923	467	0	457
	2	0.53	0.15	1,100	933	0	166
	3	0.40	0.11	1,242	1,400	0	-158
	6	0.25	0.07	1,525	2,800	0	-1,275
	12	0.14	0.04	1,743	5,600	0	-3,857
	24	0.08	0.02	1,942	11,200	0	-9,258
Runoff Vol. (ft ³)	Percol. Vol. (ft ³)	Perc. Rt. (in/hr)	Perc. Rt. (ft/day)	Required Area (ft ²)	Enter Total Design Vol.		457
457	411	8	16	25.7			

Paver Length		140 FT	
Paver Width		5 FT	
Paver Cross Sectional Storage		0.42 SF	(PaveDrain Blocks Hold 1" of Water in the Arch)
Rock Length		140 FT	
Rock Width		5 FT	
Rock Depth		1.5 FT	
Rock Cross Sectional Area		7.50 SF	
Rock Cross Sectional Storage		3.00 SF	(40% Voids)
Perc Length		140 FT	
Perc Width		5 FT	

Vol. Available **478 CF**
Time to Drain **2.0 Hours**

PaveDrain Calcs

Project/Location **Basin #3**

Using Zone "A" IDF Curve

Return Period?		50
Drainage Area (acres):	Area in ft ²	17,704
	Area in Acres	0.41
Runoff Coefficient (c)		0.65
Percolation Rate	Inches/Hr	8
Predevelopment Rate (if any)		cfs

Is there enough Percolation Area?	Enough Capacity?
YES	YES

(per geotechnical recommendations)

Compute Peak Volume

Storm Duration		I	Q	Runoff Vol	Percolation Vol	PreDev. Vol	V _R Required Vol
Min	Hr	in/hr	cfs	ft ³	ft ³	ft ³	ft ³
10	0.17	2.61	0.69	414	72	0	341
30	0.50	1.43	0.38	680	217	0	463
	1	0.89	0.24	846	433	0	413
	2	0.53	0.14	1,008	867	0	141
	3	0.40	0.11	1,138	1,300	0	-162
	6	0.25	0.06	1,398	2,600	0	-1,202
	12	0.14	0.04	1,598	5,200	0	-3,602
	24	0.08	0.02	1,780	10,400	0	-8,620
Runoff Vol. (ft ³)	Percol. Vol. (ft ³)	Perc. Rt. (in/hr)	Perc. Rt. (ft/day)	Required Area (ft ²)	Enter Total Design Vol.		413
413	372	8	16	23.2			

Paver Length	130 FT
Paver Width	5 FT
Paver Cross Sectional Storage	0.42 SF (PaveDrain Blocks Hold 1" of Water in the Arch)
Rock Length	130 FT
Rock Width	5 FT
Rock Depth	1.5 FT
Rock Cross Sectional Area	7.50 SF
Rock Cross Sectional Storage	3.00 SF (40% Voids)
Perc Length	130 FT
Perc Width	5 FT

Vol. Available **444 CF**
Time to Drain **2.0 Hours**

PaveDrain Calcs

Project/Location **Basin #4**

Using Zone "A" IDF Curve

Return Period?		50
Drainage Area (acres):	Area in ft ²	14,973
	Area in Acres	0.34
Runoff Coefficient (c)		0.65
Percolation Rate	Inches/Hr	8 (per geotechnical recommendations)
Predevelopment Rate (if any)		cfs

Is there enough Percolation Area?	Enough Capacity?
YES	YES

Compute Peak Volume

Storm Duration		I	Q	Runoff Vol	Percolation Vol	PreDev. Vol	V _R Required Vol
Min	Hr	in/hr	cfs	ft ³	ft ³	ft ³	ft ³
10	0.17	2.61	0.58	350	74	0	276
30	0.50	1.43	0.32	575	223	0	352
	1	0.89	0.20	716	445	0	271
	2	0.53	0.12	853	891	0	-38
	3	0.40	0.09	963	1,336	0	-373
	6	0.25	0.05	1,182	2,672	0	-1,490
	12	0.14	0.03	1,351	5,344	0	-3,993
	24	0.08	0.02	1,506	10,688	0	-9,182
Runoff Vol. (ft ³)	Percol. Vol. (ft ³)	Perc. Rt. (in/hr)	Perc. Rt. (ft/day)	Required Area (ft ²)	Enter Total Design Vol.		271
271	243	8	16	15.2			

Paver Length	167 FT
Paver Width	4 FT
Paver Cross Sectional Storage	0.33 SF (PaveDrain Blocks Hold 1" of Water in the Arch)
Rock Length	167 FT
Rock Width	4 FT
Rock Depth	1 FT
Rock Cross Sectional Area	4.00 SF
Rock Cross Sectional Storage	1.60 SF (40% Voids)
Perc Length	167 FT
Perc Width	4 FT

Vol. Available **323 CF**
Time to Drain **1.6 Hours**

PaveDrain Calcs

Project/Location **Basin #5**

Using Zone "A" IDF Curve

Return Period?		50
Drainage Area (acres):	Area in ft ²	10,191
	Area in Acres	0.23
Runoff Coefficient (c)		0.65
Percolation Rate	Inches/Hr	8
Predevelopment Rate (if any)		cfs

Is there enough Percolation Area?	Enough Capacity?
YES	YES

(per geotechnical recommendations)

Compute Peak Volume

Storm Duration		I	Q	Runoff Vol	Percolation Vol	PreDev. Vol	V _R Required Vol
Min	Hr	in/hr	cfs	ft ³	ft ³	ft ³	ft ³
10	0.17	2.61	0.40	238	43	0	195
30	0.50	1.43	0.22	391	130	0	261
	1	0.89	0.14	487	260	0	227
	2	0.53	0.08	580	520	0	60
	3	0.40	0.06	655	780	0	-125
	6	0.25	0.04	805	1,560	0	-755
	12	0.14	0.02	920	3,120	0	-2,200
	24	0.08	0.01	1,025	6,240	0	-5,215
Runoff Vol. (ft ³)	Percol. Vol. (ft ³)	Perc. Rt. (in/hr)	Perc. Rt. (ft/day)	Required Area (ft ³)	Enter Total Design Vol.		227
227	205	8	16	12.8			

Paver Length	130 FT
Paver Width	3 FT
Paver Cross Sectional Storage	0.25 SF (PaveDrain Blocks Hold 1" of Water in the Arch)
Rock Length	130 FT
Rock Width	3 FT
Rock Depth	1.5 FT
Rock Cross Sectional Area	4.50 SF
Rock Cross Sectional Storage	1.80 SF (40% Voids)
Perc Length	130 FT
Perc Width	3 FT

Vol. Available **266 CF**
Time to Drain **1.9 Hours**

PaveDrain Calcs

Project/Location **Basin #6**

Using Zone "A" IDF Curve

Return Period?		50
Drainage Area (acres):	Area in ft ²	5,702
	Area in Acres	0.13
Runoff Coefficient (c)		0.65
Percolation Rate	Inches/Hr	8
Predevelopment Rate (if any)		cfs

Is there enough Percolation Area?	Enough Capacity?
YES	YES

(per geotechnical recommendations)

Compute Peak Volume

Storm Duration		I	Q	Runoff Vol	Percolation Vol	PreDev. Vol	V _R Required Vol
Min	Hr	in/hr	cfs	ft ³	ft ³	ft ³	ft ³
10	0.17	2.61	0.22	133	22	0	111
30	0.50	1.43	0.12	219	67	0	152
	1	0.89	0.08	273	133	0	139
	2	0.53	0.05	325	267	0	58
	3	0.40	0.03	367	400	0	-33
	6	0.25	0.02	450	800	0	-350
	12	0.14	0.01	515	1,600	0	-1,085
	24	0.08	0.01	573	3,200	0	-2,627
Runoff Vol. (ft ³)	Percol. Vol. (ft ³)	Perc. Rt. (in/hr)	Perc. Rt. (ft/day)	Required Area (ft ²)	Enter Total Design Vol.		139
139	125	8	16	7.8			

Paver Length	100 FT
Paver Width	2 FT
Paver Cross Sectional Storage	0.17 SF (PaveDrain Blocks Hold 1" of Water in the Arch)
Rock Length	100 FT
Rock Width	2 FT
Rock Depth	2 FT
Rock Cross Sectional Area	4.00 SF
Rock Cross Sectional Storage	1.60 SF (40% Voids)
Perc Length	100 FT
Perc Width	2 FT

Vol. Available **177 CF**
Time to Drain **2.0 Hours**

PaveDrain Calcs

Project/Location **Basin #7**

Using Zone "A" IDF Curve

Return Period?		50
Drainage Area (acres):	Area in ft ²	9,317
	Area in Acres	0.21
Runoff Coefficient (c)		0.65
Percolation Rate	Inches/Hr	8 (per geotechnical recommendations)
Predevelopment Rate (if any)		cfs

Is there enough Percolation Area?	Enough Capacity?
YES	YES

Compute Peak Volume

Storm Duration		I	Q	Runoff Vol	Percolation Vol	PreDev. Vol	V _R Required Vol
Min	Hr	in/hr	cfs	ft ³	ft ³	ft ³	ft ³
10	0.17	2.61	0.36	218	39	0	178
30	0.50	1.43	0.20	358	118	0	240
	1	0.89	0.12	445	236	0	209
	2	0.53	0.07	531	472	0	59
	3	0.40	0.06	599	708	0	-109
	6	0.25	0.03	736	1,416	0	-680
	12	0.14	0.02	841	2,832	0	-1,991
	24	0.08	0.01	937	5,664	0	-4,727
Runoff Vol. (ft ³)	Percol. Vol. (ft ³)	Perc. Rt. (in/hr)	Perc. Rt. (ft/day)	Required Area (ft ²)	Enter Total Design Vol.		209
209	189	8	16	11.8			

Paver Length	118 FT	
Paver Width	3 FT	
Paver Cross Sectional Storage	0.25 SF	(PaveDrain Blocks Hold 1" of Water in the Arch)
Rock Length	118 FT	
Rock Width	3 FT	
Rock Depth	1.5 FT	
Rock Cross Sectional Area	4.50 SF	
Rock Cross Sectional Storage	1.80 SF	(40% Voids)
Perc Length	118 FT	
Perc Width	3 FT	

Vol. Available **242 CF**
Time to Drain **1.9 Hours**



GEOTECHNICAL ENGINEERING REPORT
of
Trailwinds Development
Adams Street and 42nd Street
Garden City, ID

Prepared for:

Trailwinds
2008 North 32nd Street
Boise, ID 83702

MTI File Number BI40088g

Doug Crowther
Trailwinds
2008 North 32nd Street
Boise, ID 83702
(208) 863-9517

Re: Geotechnical Engineering Report
Trailwinds Development
Adams Street and 42nd Street
Garden City, ID

Dear Crowther:

In compliance with your instructions, we have conducted a soils exploration and foundation evaluation for the above referenced development. Fieldwork for this investigation was conducted on 23 January 2014. Data have been analyzed to evaluate pertinent geotechnical conditions. Results of this investigation, together with our recommendations, are to be found in the following report. We have provided a PDF copy for your review and distribution.

Often questions arise concerning soil conditions because of design and construction details that occur on a project. MTI would be pleased to continue our role as geotechnical engineers during project implementation. Additionally, MTI would be pleased in providing materials testing and special inspection services during construction of this project. If you will advise us of the appropriate time to discuss these engineering services, we will be pleased to meet with you at your convenience.

MTI appreciates this opportunity to be of service to you and looks forward to working with you in the future. If you have questions, please call (208) 376-4748.

Respectfully Submitted,
Materials Testing & Inspection


Monica Saculles, P.E.
Geotechnical Engineer




Reviewed by: Kevin L. Schroeder, P.G.
Geotechnical Services Manager




Reviewed by: Elizabeth Brown, P.E.
Geotechnical Engineer

TABLE OF CONTENTS

INTRODUCTION.....	3
Project Description	3
Authorization.....	3
Purpose	3
Scope of Investigation	3
Warranty and Limiting Conditions.....	4
Exclusive Use	4
Report Recommendation are Limited and Subject to Misinterpretation	4
Environmental Concerns	5
SITE DESCRIPTION.....	5
Site Access	5
Regional Geology.....	5
General Site Characteristics.....	5
Regional Site Climatology and Geochemistry.....	6
Geoseismic Setting	6
SOILS EXPLORATION	6
Exploration and Sampling Procedures.....	6
Laboratory Testing Program.....	7
Soil and Sediment Profile.....	7
Volatile Organic Scan.....	7
SITE HYDROLOGY	7
Groundwater.....	8
Soil Infiltration Rates	8
FOUNDATION, SLAB, AND PAVEMENT DISCUSSION AND RECOMMENDATIONS.....	8
Foundation Design Recommendations	9
Floor Slab-on-Grade.....	9
Recommended Pavement Sections.....	10
Flexible Pavement Sections.....	10
Common Pavement Section Construction Issues	11
CONSTRUCTION CONSIDERATIONS	11
Earthwork	12
Dry Weather	12
Wet Weather.....	12
Frozen Subgrade Soils.....	13
Structural Fill.....	13
Backfill of Walls.....	14
Excavations	14
Groundwater Control.....	14
GENERAL COMMENTS	15
REFERENCES.....	16
APPENDICES	17
Acronym List.....	17
Geotechnical General Notes	18
Geotechnical Investigation Test Pit Logs	19
AASHTO Pavement Thickness Design Procedures	21
Plate 1: Vicinity Map.....	23
Plate 2: Site Map	24

INTRODUCTION

This report presents results of a geotechnical investigation and analysis in support of data utilized in design of structures as defined in the 2012 International Building Code (IBC). Information in support of groundwater and storm water issues pertinent to the practice of Civil Engineering is included. Observations and recommendations relevant to the earthwork phase of the project are also presented. Revisions in plans or drawings for the proposed development from those enumerated in this report should be brought to the attention of the soils engineer to determine whether changes in foundation recommendations are required. Deviations from noted subsurface conditions, if encountered during construction, should also be brought to the attention of the soils engineer.

Project Description

The proposed development is in the southeastern portion of the City of Garden City, Ada County, ID, and occupies a portion of the SE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 32, Township 4 North, Range 2 East, Boise Meridian. This project is expected to consist of construction of a maximum two-story commercial/retail structure ranging from 15,000 to 17,000 square feet in size, and a 64-unit, three to four-story apartment building. The structures are to be developed on approximately 3.5 acres. Total settlements are limited to 1 inch. Loads of up to 4,000 pounds per lineal foot for wall footings, and column loads of up to 50,000 pounds were assumed for settlement calculations. Additionally, assumptions have been made for traffic loading of pavements. Retaining walls are not anticipated as part of the project. MTI has not been informed of the proposed grading plan.

Authorization

Authorization to perform this exploration and analysis was given in the form of a written authorization to proceed from Doug Crowther of Trailwinds to Monica Saculles of Materials Testing and Inspection, Inc. (MTI), on 23 January 2014. Said authorization is subject to terms, conditions, and limitations described in the Professional Services Contract entered into between Trailwinds and MTI. Our scope of services for the proposed development has been provided in our proposal dated 16 January 2014 and repeated below.

Purpose

The purpose of this Geotechnical Engineering Report is to determine various soil profile components and their engineering characteristics for use by either design engineers or architects in:

- Preparing or verifying suitability of foundation design and placement
- Preparing site drainage designs
- Indicating issues pertaining to earthwork construction
- Preparing light and heavy duty pavement section design requirements

Scope of Investigation

The scope of this investigation included review of geologic literature and existing available geotechnical studies of the area, visual site reconnaissance of the immediate site, subsurface exploration of the site, field and laboratory testing of materials collected, and engineering analysis and evaluation of foundation materials.

Warranty and Limiting Conditions

MTI warrants that findings and conclusions contained herein have been formulated in accordance with generally accepted professional engineering practice in the fields of foundation engineering, soil mechanics, and engineering geology only for the site and project described in this report. These engineering methods have been developed to provide the client with information regarding apparent or potential engineering conditions relating to the site within the scope cited above and are necessarily limited to conditions observed at the time of the site visit and research. Field observations and research reported herein are considered sufficient in detail and scope to form a reasonable basis for the purposes cited above.

Exclusive Use

This report was prepared for exclusive use of the property owner(s), at the time of the report, and their retained design consultants ("Client"). Conclusions and recommendations presented in this report are based on the agreed-upon scope of work outlined in this report together with the Contract for Professional Services between the Client and Materials Testing and Inspection, Inc. ("Consultant"). Use or misuse of this report, or reliance upon findings hereof, by parties other than the Client is at their own risk. Neither Client nor Consultant make representation of warranty to such other parties as to accuracy or completeness of this report or suitability of its use by such other parties for purposes whatsoever, known or unknown, to Client or Consultant. Neither Client nor Consultant shall have liability to indemnify or hold harmless third parties for losses incurred by actual or purported use or misuse of this report. No other warranties are implied or expressed.

Report Recommendation are Limited and Subject to Misinterpretation

There is a distinct possibility that conditions may exist that could not be identified within the scope of the investigation or that were not apparent during our site investigation. Findings of this report are limited to data collected from noted explorations advanced and do not account for unidentified fill zones, unsuitable soil types or conditions, and variability in soil moisture and groundwater conditions. To avoid possible misinterpretations of findings, conclusions, and implications of this report, MTI should be retained to explain the report contents to other design professionals as well as construction professionals.

Since actual subsurface conditions on the site can only be verified by earthwork, note that construction recommendations are based on general assumptions from selective observations and selective field exploratory sampling. Upon commencement of construction, such conditions may be identified that required corrective actions, and these required corrective actions may impact the project budget. Therefore, construction recommendations in this report should be considered preliminary, and MTI should be retained to observe actual subsurface conditions during earthwork construction activities to provide additional construction recommendations as needed.

Since geotechnical reports are subject to misinterpretation, **do not** separate the soil logs from the report. Rather, provide a copy, or authorize for their use, of the complete report to other design professional or contractors.

This report is also limited to information available at the time it was prepared. In the event additional information is provided to MTI following publication of our report, it will be forwarded to the client for evaluation in the form received.

Environmental Concerns

Comments in this report concerning either onsite conditions or observations, including soil appearances and odors, are provided as general information. These comments are not intended to describe, quantify, or evaluate environmental concerns or situations. Since personnel, skills, procedures, standards, and equipment differ, a geotechnical investigation report is not intended to substitute for a geoenvironmental investigation or a Phase II/III Environmental Site Assessment. If environmental services are needed, MTI can provide, via a separate contract, those personnel who are trained to investigate and delineate soil and water contamination.

SITE DESCRIPTION

Site Access

Access to the site may be gained via Interstate 184 to the Curtis Road exit. Proceed north on Curtis Road approximately 1.0 mile to where it becomes Veteran's Memorial Parkway. Continue on Veteran's Memorial Parkway roughly 0.3 mile to its intersection with Adams Street. The site occupies the northwest corner of this intersection. Presently the site exists as a vacant residence and a mostly vacant trailer park with associated paved areas. A few trailers are still present within the northern portion of the trailer park. The location is depicted on site map plates included in the **Appendix**.

Regional Geology

The project site is located within the western Snake River Plain of southwestern Idaho and eastern Oregon. The plain is a northwest trending rift basin, about 45 miles wide and 200 miles long, that developed about 14 million years ago (Ma) and has since been occupied sporadically by large inland lakes. Geologic materials found within and along the plain's margins reflect volcanic and fluvial/lacustrine sedimentary processes that have led to an accumulation of approximately 1 to 2 km of interbedded volcanic and sedimentary deposits within the plain. Along the margins of the plain, streams that drained the highlands to the north and south provided coarse to fine-grained sediments eroded from granitic and volcanic rocks, respectively. About 2 million years ago the last of the lakes was drained and since that time fluvial erosion and deposition has dominated the evolution of the landscape. The project site is underlain by "Alluvium of Boise River" as mapped by Othberg and Stanford (1993). These Holocene (10,000 years ago to present) age deposits accumulated as the result of stream processes on low-lying river beds, flood plains and alluvial fans. Deposits are composed of sandy cobble gravel upstream grading to sandy pebble gravel downstream and typically contain no pedogenic clay. Gravel deposits underlie the flood plain of the Boise River to depths of 23-35 feet and overlie a surface cut by the river into earlier Tertiary basin-fill sediments.

General Site Characteristics

This proposed development consists of approximately 3.5 acres of relatively level terrain. Throughout the majority of the site, surficial soils consist of silt-sand mixtures. Vegetation primarily consists of mature trees and landscape grasses; however, bunchgrass and other native weed and grass varieties typical of arid to semi-arid environments were also present.

Regional drainage is north toward the Boise River. Storm water drainage for the site is achieved by both sheet runoff and percolation through surficial soils. Runoff predominates for the paved areas while percolation prevails across the unpaved areas. From the south and east, intermittent off-site storm water may drain onto the project site. Storm water drainage collection and retention systems were not noted on the project site, but are planned to be constructed as part of the development.

Regional Site Climatology and Geochemistry

According to the Western Regional Climate Center, the average precipitation for Treasure Valley is on the order of 10 to 12 inches per year, with an annual snowfall of approximately 20 inches and a range from 3 to 49 inches. The monthly mean daily temperatures range from 21° F to 95° F with daily extremes ranging from -25° F to 111° F. Winds are generally from the northwest or southeast with an annual average wind speed of approximately 9 miles per hour (mph) with a maximum of 62 mph. Soils and sediments in the area are primarily derived from siliceous materials and exhibit low electro-chemical potential for corrosion of metals or concretes. Local aggregates are generally appropriate for Portland cement and lime cement mixtures. Surface waters, groundwaters, and soils in the region typically have pH levels ranging from 7.2 to 8.2.

Geoseismic Setting

Soils on site are classed as Site Class D in accordance with Chapter 20 of the American Society of Civil Engineers (ASCE) publication ASCE/SEI 7-10. Structures constructed on this site should be designed per IBC requirements for such a seismic classification. Our investigation did not reveal hazards resulting from potential earthquake motions including: slope instability, liquefaction, and surface rupture caused by faulting or lateral spreading. Incidence and anticipated acceleration of seismic activity in the area is low.

SOILS EXPLORATION

Exploration and Sampling Procedures

Field exploration conducted to determine engineering characteristics of subsurface materials included a reconnaissance of the project site and investigation by test pit. Test pit sites were located in the field by means of visual approximation from on-site features or known locations and are presumed to be accurate to within a few feet. Upon completion of investigation, each test pit was backfilled with loose excavated materials. Re-excavation and compaction of these test pit areas are required prior to construction of overlying structures.

In addition, samples were obtained from representative soil strata encountered. Samples obtained have been visually classified in the field by professional staff, identified according to test pit number and depth, placed in sealed containers, and transported to our laboratory for additional testing. Subsurface materials have been described in detail on logs provided in the **Appendix**. Results of field and laboratory tests are also presented on these logs. MTI recommends that these logs **not** be used to estimate fill material quantities.

Laboratory Testing Program

Along with our field investigation, a supplemental laboratory testing program was conducted to determine additional pertinent engineering characteristics of subsurface materials necessary in an analysis of the anticipated behavior of the proposed structures. Laboratory tests were conducted in accordance with current applicable American Society for Testing and Materials (ASTM) specifications, and results of these tests are to be found on the accompanying logs located in the **Appendix**. The laboratory testing program for this report included: Atterberg Limits Tests - ASTM D4318 and Grain Size Analysis - ASTM C117/C136.

Soil and Sediment Profile

The profile below represents a generalized interpretation for the project site. Note that on site soils strata, encountered between test pit locations, may vary from the individual soil profiles presented in the logs, which can be found in the **Appendix**.

The materials encountered during exploration were quite typical for the geologic area mapped as Alluvium of Boise River. Surficial soils were predominately sandy silts and silty sands. Sandy silts were primarily brown, slightly moist, very stiff to hard, and contained fine-grained sand. Silty sands were light brown to brown, slightly moist, medium dense, and contained fine to medium-grained sand. Organic materials were generally encountered to depths of roughly 1.5 feet bgs, though some tree roots were encountered to depths of up to 5.3 feet bgs.

Beneath the surficial silt-sand mixtures, poorly graded gravel with sand sediments were encountered. These gravels were most often classified as tan to light brown, dry to saturated, and medium dense. Fine to coarse-grained sand, fine to coarse gravels, and 10-inch-minus cobbles were encountered throughout this horizon.

Competency of test pit walls varied little across the site. In general, fine grained soils remained stable while more granular sediments readily sloughed. However, moisture contents will also affect wall competency with saturated soils having a tendency to readily slough when under load and unsupported.

Volatile Organic Scan

No environmental concerns were identified prior to commencement of the investigation. Therefore, soils obtained during on-site activities were not assessed for volatile organic compounds by portable photoionization detector. Samples obtained during our exploration activities exhibited no odors or discoloration typically associated with this type contamination. Groundwater encountered did not exhibit obvious signs of contamination.

SITE HYDROLOGY

Existing surface drainage conditions are defined in the **General Site Characteristics** section. Information provided in this section is limited to observations made at the time of the investigation. Either regional or local ordinances may require information beyond the scope of this report.

Groundwater

During this field investigation, groundwater was encountered in test pits at depths ranging from 8.0 to 8.1 feet bgs. Soil moistures in the test pits were generally dry to slightly moist within surficial silt-sand mixtures. Within the poorly graded gravels, soil moistures graded from dry to saturated as the water table was approached and penetrated. A 1-inch water service line was encountered within this horizon along the southeast end of test pit 3, at a depth of 1.8 feet bgs. The broken water line affected natural moisture contents within the test pit and also prevented determination of whether groundwater was encountered.

In the vicinity of the project site, groundwater levels are controlled in large part by the stage and flow of the Boise River. Maximum groundwater elevations likely occur during late spring to early summer runoff season. During previous investigations performed throughout 2004 to 2011 within approximately ½-mile of the project site, groundwater was encountered within numerous test pits at depths ranging from 5.8 to 9.4 feet bgs.

Based on evidence of this investigation and background knowledge of the area, MTI estimates groundwater depths to remain greater than approximately 5 feet bgs throughout the year. Since this is an estimated depth and seasonal groundwater levels fluctuate, actual levels should be confirmed by periodic groundwater data collected from a piezometer installed in test pit 3. If desired, MTI is available to perform this monitoring.

Soil Infiltration Rates

Soil permeability, which is a measure of the ability of a soil to transmit a fluid, was not tested in the field. Given the absence of direct measurements, for this report an estimation of infiltration is presented using generally recognized values for each soil type and gradation. Of soils comprising the generalized soil profile for this study, sandy silt soils will commonly exhibit infiltration rates from 2 to 4 inches per hour. Silty sand sediments usually display rates of 4 to 8 inches per hour. Poorly graded gravel sediments typically exhibit infiltration values in excess of 12 inches per hour. Infiltration testing is generally not required within these sediments because of their free-draining nature.

It is recommended that infiltration facilities constructed on the site be extended into native poorly graded gravel with sand sediments. Excavation depths ranging from roughly 2 to 4 feet bgs should be anticipated to expose these poorly graded gravel with sand sediments. Because of the high soil permeability, ASTM C33 filter sand, or equivalent, should be incorporated into design of infiltration facilities. An infiltration rate of 8 inches per hour should be used in design. Actual infiltration rates should be confirmed at the time of construction.

FOUNDATION, SLAB, AND PAVEMENT DISCUSSION AND RECOMMENDATIONS

Various foundation types have been considered for support of the proposed structures. Two requirements must be met in the design of foundations. First, the applied bearing stress must be less than the ultimate bearing capacity of foundation soils to maintain stability. Second, total and differential settlement must not exceed an amount that will produce an adverse behavior of the superstructure. Allowable settlement is usually exceeded before bearing capacity considerations become important; thus, allowable bearing pressure is normally controlled by settlement considerations.

Considering subsurface conditions and the proposed construction, it is recommended that the structures be founded upon conventional spread footings and continuous wall footings. Total settlements should not exceed 1 inch if the following design and construction recommendations are observed.

Foundation Design Recommendations

Based on data obtained from the site and test results from various laboratory tests performed, MTI recommends following guidelines for the net allowable soils bearing capacity:

Soil Bearing Capacity

Footing Depth	ASTM D1557 Subgrade Compaction	Net Allowable Soil Bearing Capacity
Footings must bear on competent, undisturbed, native poorly graded gravel with sand sediments or compacted structural fill. Existing sandy silt and silty sand soils, organic materials, and fill materials (if encountered) must be completely removed from below foundation elements. ¹ Excavation depths ranging from 2 to 4 feet bgs should be anticipated to expose proper bearing soils. Additional excavation should be expected in areas where large tree roots are present.	Not Required for Native Soil 95% for Structural Fill	3,500 lbs/ft ² A $\frac{1}{3}$ increase is allowable for short-term loading, which is defined by seismic events or designed wind speeds.

¹It will be required for MTI personnel to verify the bearing soil suitability for each structure at the time of construction.

A sliding frictional coefficient value of 0.45 should be used for footings bearing on native gravel sediments or granular structural fill. A passive lateral earth pressure of 337 pounds per square foot (psf) should be used for sandy silt or silty sand (ML/SM) soils. For compacted native gravel sediments or sandy gravel fill, a passive lateral earth pressure of 496 psf should be used.

Footings should be proportioned to meet either the stated soil bearing capacity or the 2012 IBC minimum requirements. Total settlement should be limited to approximately 1 inch, and differential settlement should be limited to approximately $\frac{1}{2}$ inch. Objectionable soil types encountered at the bottom of footing excavations should be removed and replaced with structural fill. Excessively loose or soft areas that are encountered in the footing subgrade will require over-excavation and backfilling with structural fill. To minimize the effects of slight differential movement that may occur because of variations in character of supporting soils and seasonal moisture content, MTI recommends continuous footings be suitably reinforced to make them as rigid as possible. For frost protection, the bottom of external footings should be 30 inches below finished grade.

Floor Slab-on-Grade

Uncontrolled fill should be expected in portions of the site where structures, utility lines, and pavement are or were present. MTI recommends that these fill soils be excavated to a sufficient depth to expose competent, native soils or to a minimum depth of 1½ feet below finished subgrade. MTI personnel must be present during excavation to identify these materials.

Organic, loose, or obviously compressive materials must be removed prior to placement of concrete floors or floor-supporting fill. In addition, the remaining subgrade should be treated in accordance with guidelines presented in the **Earthwork** section. Areas of excessive yielding should be excavated and backfilled with structural fill. Fill used to increase the elevation of the floor slab should meet requirements detailed in the **Structural Fill** section. Fill materials must be compacted to a minimum 95 percent of maximum density as determined by ASTM D1557.

A free-draining granular mat (drainage fill course) should be provided below slabs-on-grade. This should be a minimum of 4 inches in thickness and properly compacted. The mat should consist of a sand and gravel mixture, complying with Idaho Standards for Public Works Construction (ISPWC) specifications for ¾-inch (Type 1) crushed aggregate. A moisture-retarder should be placed beneath floor slabs to minimize potential ground moisture effects on moisture-sensitive floor coverings. The moisture-retarder should be at least 15-mil in thickness and have a permeance of less than 0.01 US perms as determined by ASTM E96. Placement of the moisture-retarder will require special consideration with regard to effects on the slab-on-grade. The granular mat should be compacted to no less than 95 percent of maximum density as determined by ASTM D1557. Upon request, MTI can provide further consultation regarding installation.

Recommended Pavement Sections

MTI has made assumptions for traffic loading variables based on the character of the proposed construction. The client shall review and understand these assumptions to make sure they reflect intended use and loading of pavements both now and in the future. Based on experience with soils in the region, a subgrade California Bearing Ratio (CBR) value of 5 has been assumed for near-surface silty sand sediments on site. The following are minimum thickness requirements for assured pavement function. Depending on site conditions, additional work, e.g. soil preparation, may be required to support construction equipment.

Flexible Pavement Sections

The American Association of State Highway and Transportation Officials (AASHTO) design method has been used to calculate the following pavement sections. Calculation sheets provided in the **Appendix** indicate the soils constant, traffic loading, traffic projections, and material constants used to calculate the pavement sections. MTI recommends that materials used in the construction of asphaltic concrete pavements meet requirements of the ISPWC Standard Specification for Highway Construction. Construction of the pavement section should be in accordance with these specifications and should adhere to guidelines recommended in the section on **Construction Considerations**.

AASHTO Flexible Pavement Specifications

Pavement Section Component¹	Driveways and Parking No Truck Access	Driveways and Parking Truck Access
Asphaltic Concrete	2.5 Inches	3.0 Inches
Crushed Aggregate Base	4.0 Inches	4.0 Inches
Structural Subbase	8.0 Inches	12.0 Inches
Compacted Subgrade	Not Required	Not Required

¹It will be required for MTI personnel to verify subgrade competency at the time of construction.

- Asphaltic Concrete: Asphalt mix design shall meet the requirements of ISPWC, Section 810 Class III plant mix. Materials shall be placed in accordance with ISPWC Standard Specifications for Highway Construction.
- Aggregate Base: Material complying with ISPWC Standards for Crushed Aggregate Materials.
- Structural Subbase: Material should comply with the requirements detailed in the **Structural Fill** section of this report except that the maximum material diameter is no more than $\frac{2}{3}$ the component thickness.

Common Pavement Section Construction Issues

The subgrade upon which above pavement sections are to be constructed must be properly stripped, inspected, and proof-rolled. Proof rolling of subgrade soils should be accomplished using a heavy rubber-tired, fully loaded, tandem-axle dump truck or equivalent. Verification of subgrade competence by MTI personnel at the time of construction is required. Fill materials on the site must demonstrate the indicated compaction prior to placing material in support of the pavement section. MTI anticipates that pavement areas will be subjected to moderate traffic. MTI does not anticipate pumping material to become evident during compaction, but subgrade silty soils near and above optimum moisture contents may tend to pump. Pumping or soft areas must be removed and replaced with structural fill.

Fill material and aggregates in support of the pavement section must be compacted to no less than 95 percent of the maximum dry density as determined by ASTM D698 for flexible pavements and by ASTM D1557 for rigid pavements. If a material placed as a pavement section component cannot be tested by usual compaction testing methods, then compaction of that material must be approved by observed proof rolling. Minor deflections from proof rolling for flexible pavements are allowable. Deflections from proof rolling of rigid pavement support courses should not be visually detectable.

MTI recommends that rigid concrete pavement be provided for heavy garbage receptacles. This will eliminate damage caused by the considerable loading transferred through the small steel wheels onto asphaltic concrete. Rigid concrete pavement should consist of Portland Cement Concrete Pavement (PCCP) generally adhering to ITD specifications for Urban Concrete. PCCP should be 6 inches thick on a 4-inch drainage fill course (see **Floor Slab-on-Grade** section), and should be reinforced with welded wire fabric. Control joints must be on 12-foot centers or less.

CONSTRUCTION CONSIDERATIONS

Recommendations in this report are based upon structural elements of the project being founded on competent, native poorly graded gravel with sand sediments or compacted structural fill. Structural areas should be stripped to an elevation that exposes these soil types.

Earthwork

Excessively organic soils, deleterious materials, or disturbed soils generally undergo high volume changes when subjected to loads, which is detrimental to subgrade behavior in the area of pavements, floor slabs, structural fills, and foundations. Mature trees, landscape grasses, and other weeds and grasses with associated root systems were noted at the time of our investigation. It is recommended that organic or disturbed soils, if encountered, be removed to depths of 1 foot (minimum), and wasted or stockpiled for later use. Stripping depths should be adjusted in the field to assure that the entire root zone or disturbed zone or topsoil are removed prior to placement and compaction of structural fill materials. Exact removal depths should be determined during grading operations by MTI personnel, and should be based upon subgrade soil type, composition, and firmness or soil stability. Existing onsite structures will be demolished as part of the project. All debris and fill material associated with demolition activities must be completely removed. The resultant excavation must be backfilled with structural fill materials as defined in the **Structural Fill** section.

If underground storage tanks, underground utilities, wells, or septic systems are discovered during construction activities, they must be decommissioned then removed or abandoned in accordance with governing Federal, State, and local agencies. Excavations developed as the result of such removal must be backfilled with structural fill materials as defined in the **Structural Fill** section.

MTI should oversee subgrade conditions (i.e., moisture content) as well as placement and compaction of new fill (if required) after native soils are excavated to design grade. Recommendations for structural fill presented in this report can be used to minimize volume changes and differential settlements that are detrimental to the behavior of footings, pavements, and floor slabs. Sufficient density tests should be performed to properly monitor compaction. For structural fill beneath building structures, one in-place density test per lift for every 5,000 square feet is recommended. In parking and driveway areas, this can be decreased to one test per lift for every 10,000 square feet.

Dry Weather

If construction is to be conducted during dry seasonal conditions, many problems associated with soft soils may be avoided. However, some rutting of subgrade soils may be induced by shallow groundwater conditions related to springtime runoff or irrigation activities during late summer through early fall. Problems may also arise because of lack of moisture in native and fill soils at time of placement. This will require the addition of water to achieve near-optimum moisture levels. Low-cohesion soils exposed in excavations may become friable, increasing chances of sloughing or caving. Measures to control excessive dust should be considered as part of the overall health and safety management plan.

Wet Weather

If construction is to be conducted during wet seasonal conditions (commonly from mid-November through May), problems associated with soft soils must be considered as part of the construction plan. During this time of year, fine-grained soils such as silts and clays will become unstable with increased moisture content, and eventually deform or rut. Additionally, constant low temperatures reduce the possibility of drying soils to near optimum conditions.

Frozen Subgrade Soils

Prior to placement of structural fill materials or foundation elements, frozen subgrade soils must be allowed to thaw or be stripped to depths that expose non-frozen soils and wasted or stockpiled for later use. Stockpiled materials must be allowed to thaw and return to near-optimal conditions prior to use as structural fill.

Structural Fill

Soils recommended for use as structural fill are those classified as GW, GP, SW, and SP in accordance with the Unified Soil Classification System (USCS) (ASTM D2487). Use of silty soils (USCS designation of GM, SM, and ML) as structural fill may be acceptable. However, use of silty soils (GM, SM, and ML) as structural fill below footings is prohibited. These materials require very high moisture contents for compaction and require a long time to dry out if natural moisture contents are too high and may also be susceptible to frost heave under certain conditions. Therefore these materials can be quite difficult to work with as moisture content, lift thickness, and compactive effort becomes difficult to control. If silty soil is used for structural fill, lift thicknesses should not exceed 6 inches (loose), and fill material moisture must be closely monitored at both the working elevation and the elevations of materials already placed. Following placement, silty soils must be protected from degradation resulting from construction traffic or subsequent construction.

Recommended granular structural fill materials, those classified as GW, GP, SW, and SP, should consist of a 6-inch minus select, clean, granular soil with no more than 50 percent oversize (greater than ¾-inch) material and no more than 12 percent fines (passing No. 200 sieve). These fill materials should be placed in layers not to exceed 12 inches in loose thickness. Prior to placement of structural fill materials, surfaces must be prepared as outlined in the **Construction Considerations** section. Structural fill material should be moisture-conditioned to achieve optimum moisture content prior to compaction. For structural fill below footings, areas of compacted backfill must extend outside the perimeter of the footing for a distance equal to the thickness of fill between the bottom of foundation and underlying soils, or 5 feet, whichever is less. All fill materials must be monitored during placement and tested to confirm compaction requirements, outlined below, have been achieved.

Each layer of structural fill must be compacted, as outlined below:

- Below Structures and Rigid Pavements: A minimum of 95 percent of the maximum dry density as determined by ASTM D1557.
- Below Flexible Pavements: A minimum of 92 percent of the maximum dry density as determined by ASTM D1557 or 95 percent of the maximum dry density as determined by ASTM D698.

The ASTM D1557 test method must be used for samples containing up to 40 percent oversize (greater than ¾-inch) particles. If material contains more than 40 percent but less than 50 percent oversize particles, compaction of fill must be confirmed by proof rolling each lift with a 10-ton vibratory roller (or equivalent) until the maximum density has been achieved. Density testing must be performed after each proof rolling pass until the in-place density test results indicate a drop (or no increase) in the dry density, defined as the maximum density or "break over" point. The number of required passes should be used as the requirement on the remainder of fill placement. Material should contain sufficient fines to fill void spaces, and must not contain more than 50 percent oversize particles.

Backfill of Walls

Backfill materials must conform to the requirements of structural fill, as defined in this report. For wall heights greater than 2.5 feet, the maximum material size should not exceed 4 inches in diameter. Placing oversized material against rigid surfaces interferes with proper compaction, and can induce excessive point loads on walls. Backfill shall not commence until the wall has gained sufficient strength to resist placement and compaction forces. Further, retaining walls above 2.5 feet in height shall be backfilled in a manner that will limit the potential for damage from compaction methods and/or equipment. It is recommended that only small hand-operated compaction equipment be used for compaction of backfill within a horizontal distance equal to the height of the wall, measured from the back face of the wall.

Backfill should be compacted in accordance with the specifications for structural fill, except in those areas where it is determined that future settlement is not a concern, such as planter areas. In nonstructural areas, backfill must be compacted to a firm and unyielding condition.

Excavations

Shallow excavations that do not exceed 4 feet in depth may be constructed with side slopes approaching vertical. Below this depth, it is recommended that slopes be constructed in accordance with Occupational Safety and Health Administration (OSHA) regulations, section 1926, subpart P. Based on these regulations, on-site soils are classified as type "C" soil, and as such, excavations within these soils should be constructed at a maximum slope of 1½ foot horizontal to 1 foot vertical (1½H:1V) for excavations up to 20 feet in height. Excavations in excess of 20 feet will require additional analysis. Note that these slope angles are considered stable for short-term conditions only, and will not be stable for long-term conditions.

During our subsurface exploration, sloughing of native granular sediments from test pit sidewalls was observed, particularly after penetration of the water table. For deep excavations, native granular sediments cannot be expected to remain in position. These materials are prone to failure and may collapse, thereby, undermining upper soils layers. This is especially true when excavations approach depths near the water table. Care must be taken to ensure that excavations are properly backfilled in accordance with procedures outlined in this report.

Groundwater Control

Groundwater was encountered during the investigation but is anticipated to be below the depth of most construction. If recommended, excavations below the water table will require a dewatering program. Dewatering will be required prior to placement of fill materials. Placement of concrete can be accomplished through water by the use of a tremie. It may be possible to discharge dewatering effluent to remote portions of the site, to a sump, or to a pit. This will essentially recycle effluent, thus eliminating the need to enter into agreements with local drainage authorities. Should the scope of the proposed project change, MTI should be contacted to provide more detailed groundwater control measures.

Special precautions may be required for control of surface runoff and subsurface seepage. It is recommended that runoff be directed away from open excavations. Silty soils may become soft and pump if subjected to excessive traffic during time of surface runoff. Ponded water in construction areas should be drained through methods such as trenching, sloping, crowning grades, nightly smooth drum rolling, or installing a French drain system. Additionally, temporary or permanent driveway sections should be constructed if extended wet weather is forecasted.

GENERAL COMMENTS

When plans and specifications are complete, or if significant changes are made in the character or location of the proposed development, consultation with MTI should be arranged as supplementary recommendations may be required. Suitability of subgrade soils and compaction of structural fill materials must be verified by MTI personnel prior to placement of structural elements. Additionally, monitoring and testing should be performed to verify that suitable materials are used for structural fill and that proper placement and compaction techniques are utilized.

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APPENDICES

ACRONYM LIST

AASHTO:	American Association of State Highway and Transportation Officials
ACHD:	Ada County Highway District
ACI	American Concrete Institute
ASCE	American Society of Civil Engineers
ASTM:	American Society for Testing and Materials
bgs:	below ground surface
CBR:	California Bearing Ratio
D:	natural dry unit weight, pcf
ESAL	Equivalent Single Axle Load
GS:	grab sample
IBC:	International Building Code
IDEQ	Idaho Department of Environmental Quality
ISPWC:	Idaho Standards for Public Works Construction
ITD:	Idaho Transportation Department
LL:	Liquid Limit
M:	water content
MSL:	mean sea level
N:	Standard "N" penetration: blows per foot, Standard Penetration Test
NP:	nonplastic
OSHA	Occupational Safety and Health Administration
PCCP:	Portland Cement Concrete Pavement
PERM:	vapor permeability
PI:	Plasticity Index
PID:	photoionization detector
PVC:	polyvinyl chloride
Qc:	cone penetrometer value, unconfined compressive strength, psi
Qp:	Penetrometer value, unconfined compressive strength, tsf
Qu:	Unconfined compressive strength, tsf
RMR	Rock Mass Rating
RQD	Rock Quality Designation
R-Value	Resistance Value
SPT:	Standard Penetration Test (140:pound hammer falling 30 in. on a 2:in. split spoon)
USCS:	Unified Soil Classification System
USDA:	United States Department of Agriculture
UST:	underground storage tank
V:	vane value, ultimate shearing strength, tsf

GEOTECHNICAL GENERAL NOTES

RELATIVE DENSITY AND CONSISTENCY CLASSIFICATION			
Coarse-Grained Soils	SPT Blow Counts (N)	Fine-Grained Soils	SPT Blow Counts (N)
Very Loose:	< 4	Very Soft:	< 2
Loose:	4-10	Soft:	2-4
Medium Dense:	10-30	Medium Stiff:	4-8
Dense:	30-50	Stiff:	8-15
Very Dense:	>50	Very Stiff:	15-30
		Hard:	>30

Moisture Content	
Description	Field Test
Dry	Absence of moisture, dusty, dry to touch
Moist	Damp but not visible moisture
Wet	Visible free water, usually soil is below water table

Cementation	
Description	Field Test
Weakly	Crumbles or breaks with handling or slight finger pressure
Moderately	Crumbles or breaks with considerable finger pressure
Strongly	Will not crumble or break with finger pressure

PARTICLE SIZE					
Boulders:	>12 in.	Coarse-Grained Sand:	5 to 0.6 mm	Silts:	0.075 to 0.005 mm
Cobbles:	12 to 3 in.	Medium-Grained Sand:	0.6 to 0.2 mm	Clays:	<0.005 mm
Gravel:	3 in. to 5 mm	Fine-Grained Sand:	0.2 to 0.075 mm		

UNIFIED SOIL CLASSIFICATION SYSTEM			
Major Divisions		Symbol	Soil Descriptions
Coarse-Grained Soils <50% passes No.200 sieve	Gravel & Gravelly Soils <50% coarse fraction passes No.4 sieve	GW	Well-graded gravels; gravel/sand mixtures with little or no fines
		GP	Poorly-graded gravels; gravel/sand mixtures with little or no fines
		GM	Silty gravels; poorly-graded gravel/sand/silt mixtures
		GC	Clayey gravels; poorly-graded gravel/sand/clay mixtures
	Sand & Sandy Soils >50% coarse fraction passes No.4 sieve	SW	Well-graded sands; gravelly sands with little or no fines
		SP	Poorly-graded sands; gravelly sands with little or no fines
		SM	Silty sands; poorly-graded sand/gravel/silt mixtures
		SC	Clayey sands; poorly-graded sand/gravel/clay mixtures
Fine Grained Soils >50% passes No.200 sieve	Silts & Clays LL < 50	ML	Inorganic silts; sandy, gravelly or clayey silts
		CL	Lean clays; inorganic, gravelly, sandy, or silty, low to medium-plasticity clays
		OL	Organic, low-plasticity clays and silts
	Silts & Clays LL > 50	MH	Inorganic, elastic silts; sandy, gravelly or clayey elastic silts
		CH	Fat clays; high-plasticity, inorganic clays
		OH	Organic, medium to high-plasticity clays and silts
Highly Organic Soils		PT	Peat, humus, hydric soils with high organic content

GEOTECHNICAL INVESTIGATION TEST PIT LOGS

 Test Pit Log #: **TP-1** Date Advanced: **23 Jan 2014** Logged by: **Monica Saculles, P.E.**

 Excavated by: **Struckman's Backhoe Service** Location: **See Site Map Plates**

 Depth to Water Table: **8.0 Feet bgs**

 Total Depth: **8.7 Feet bgs**

Depth (Feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (Feet bgs)	Qp	Lab Test ID
0.0-1.5	Sandy Silt (ML): <i>Brown, slightly moist, very stiff to hard, with fine-grained sand. --Organic material present throughout, with limited tree roots present to a depth of 2.2 feet bgs.</i>			4.0-4.5+	
1.5-2.2	Silty Sand (SM): <i>Light brown, slightly moist, medium dense, with fine to medium-grained sand.</i>				
2.2-8.7	Poorly Graded Gravel with Sand (GP): <i>Tan to light brown, dry to saturated, medium dense, with fine to coarse-grained sand, fine to coarse gravel, and 8-inch-minus rounded to sub-rounded cobbles.</i>				

 Test Pit Log #: **TP-2** Date Advanced: **23 Jan 2014** Logged by: **Monica Saculles, P.E.**

 Excavated by: **Struckman's Backhoe Service** Location: **See Site Map Plates**

 Depth to Water Table: **8.1 Feet bgs**

 Total Depth: **8.9 Feet bgs**

Depth (Feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (Feet bgs)	Qp	Lab Test ID
0.0-1.0	Sandy Silt (ML): <i>Brown, slightly moist, very stiff, with fine-grained sand. --Organic material present to a depth of 1.5 feet bgs, with tree roots present to a depth of 5.3 feet bgs.</i>			3.25-3.5	
1.0-3.5	Silty Sand (SM): <i>Light brown, slightly moist, medium dense, with fine to medium-grained sand.</i>				
3.5-8.9	Poorly Graded Gravel with Sand (GP): <i>Tan to light brown, dry to saturated, medium dense, with fine to coarse-grained sand, fine to coarse gravel, and 10-inch-minus rounded to sub-rounded cobbles.</i>				

Environmental Services Geotechnical Engineering Construction Materials Testing Special Inspections

GEOTECHNICAL INVESTIGATION TEST PIT LOG

Test Pit Log #: TP-3 Date Advanced: 23 Jan 2014 Logged by: Monica Saculles, P.E.

Excavated by: Struckman's Backhoe Service

Location: See Site Map Plates

Depth to Water Table: Unknown

Total Depth: 7.9 Feet bgs

Notes: Piezometer installed to 7.9 feet bgs.

Depth (Feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (Feet bgs)	Qp	Lab Test ID
0.0-1.5	Silty Sand (SM): <i>Brown, slightly moist, medium dense, with fine-grained sand. --Organic material present throughout.</i>	GS	0.5-0.6		A
1.5-7.9	Poorly Graded Gravel with Sand (GP): <i>Tan to light brown, dry to saturated, medium dense, with fine to coarse-grained sand, fine to coarse gravel, and 10-inch-minus rounded to sub-rounded cobbles. --A 1-inch water service line was encountered at a depth of 1.8 feet bgs in the southeast end of the test pit. This broken water line affected natural moisture contents and also prevented determination of whether groundwater was encountered.</i>				

Lab Test ID	M	LL	PI	Sieve Analysis				
				#4	#10	#40	#100	#200
-	%	-	-					
A	9.8	NP	NP	98	98	92	61	42.1

AASHTO PAVEMENT THICKNESS DESIGN PROCEDURES
Pavement Section Design Location: Trailwinds Development, No Truck Access

Average Daily Traffic Count:	400	All Lanes & Both Directions
Design Life:	20	Years
Percent of Traffic in Design Lane:	50%	
Terminal Serviceability Index (Pt):	2.5	
Level of Reliability:	95	
Subgrade CBR Value:	5	Subgrade Mr: 7,500

Calculation of Design-18 kip ESALs

	Daily Traffic	Growth Rate	Load Factors	Design ESALs
Passenger Cars:	130	2.0%	0.0008	922
Buses:	0	2.0%	0.6806	0
Panel & Pickup Trucks:	65	2.0%	0.0122	7,033
2-Axle, 6-Tire Trucks:	4	2.0%	0.1890	6,705
Concrete Trucks:	1.0	2.0%	4.4800	39,731
Dump Trucks:	0	2.0%	3.6300	0
Tractor Semi Trailer Trucks:	0	2.0%	2.3719	0
Double Trailer Trucks:	0	2.0%	2.3187	0
Heavy Tractor Trailer Combo Trucks:	0	2.0%	2.9760	0
Average Daily Traffic in Design Lane:	200			

Total Design Life 18-kip ESALs: 54,391

Actual Log (ESALs): 4.736

Trial SN: 2.29

Trial Log (ESALs): 4.745

Pavement Section Design SN: 2.41

	Design Depth Inches	Structural Coefficient	Drainage Coefficient
Asphaltic Concrete:	2.50	0.42	n/a
Asphalt-Treated Base:	0.00	0.25	n/a
Cement-Treated Base:	0.00	0.17	n/a
Crushed Aggregate Base:	4.00	0.14	1.0
Pit Run Aggregate Subgrade:	8.00	0.10	1.0
Special Aggregate Subgrade:	0.00	0.09	0.9

AASHTO PAVEMENT THICKNESS DESIGN PROCEDURES
Pavement Section Design Location: Trailwinds Development, Truck Access

Average Daily Traffic Count:	400	All Lanes & Both Directions
Design Life:	20	Years
Percent of Traffic in Design Lane:	50%	
Terminal Seviceability Index (Pt):	2.5	
Level of Reliability:	95	
Subgrade CBR Value:	5	Subgrade Mr: 7,500

Calculation of Design-18 kip ESALs

	Daily Traffic	Growth Rate	Load Factors	Design ESALs
Passenger Cars:	110	2.0%	0.0008	780
Buses:	5	2.0%	0.6806	30,180
Panel & Pickup Trucks:	64	2.0%	0.0122	6,925
2-Axle, 6-Tire Trucks:	15	2.0%	0.1890	25,142
Concrete Trucks:	1.0	2.0%	4.4800	39,731
Dump Trucks:	2	2.0%	3.6300	64,386
Tractor Semi Trailer Trucks:	2	2.0%	2.3719	42,071
Double Trailer Trucks:	1	2.0%	2.3187	20,563
Heavy Tractor Trailer Combo Trucks:	0	2.0%	2.9760	0
Average Daily Traffic in Design Lane:	200			

Total Design Life 18-kip ESALs: 229,778

Actual Log (ESALs): 5.361

Trial SN: 2.90

Trial Log (ESALs): 5.362

Pavement Section Design SN: 3.02

	Design Depth Inches	Structural Coefficient	Drainage Coefficient
Asphaltic Concrete:	3.00	0.42	n/a
Asphalt-Treated Base:	0.00	0.25	n/a
Cement-Treated Base:	0.00	0.17	n/a
Crushed Aggregate Base:	4.00	0.14	1.0
Pit Run Aggregate Subgrade:	12.00	0.10	1.0
Special Aggregate Subgrade:	0.00	0.09	0.9

MAP NOTES:

- Delorme Street Atlas
- Not to Scale

LEGEND

Approximate Site Location



Trailwinds Development

Adams Street and 42nd Street
Garden City, ID

Modified from Delorme by: MHS

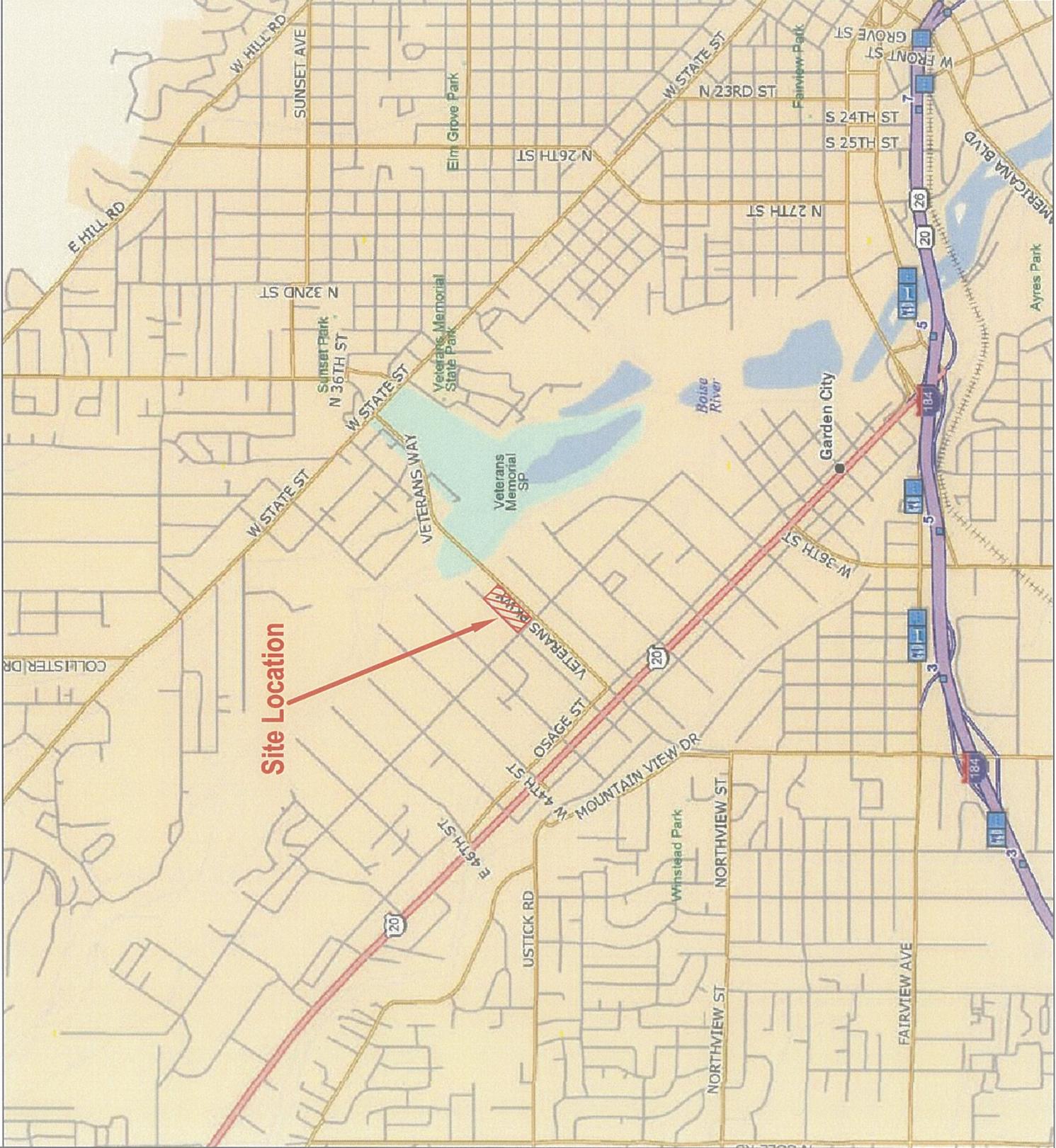
27 January 2014

Drawing: B140088g



**MATERIALS
TESTING &
INSPECTION**

2791 S. Victory View Way
Boise, ID 83709-2835
Phone: 208 376-4748
Fax: 208 922-6515
E-mail: mti@mti-id.com



Site Location

NOTES:

- Not to Scale

LEGEND

Approximate Site Boundary

Approximate MTI Test Pit Location

Approximate MTI Test Pit Location with Piezometer



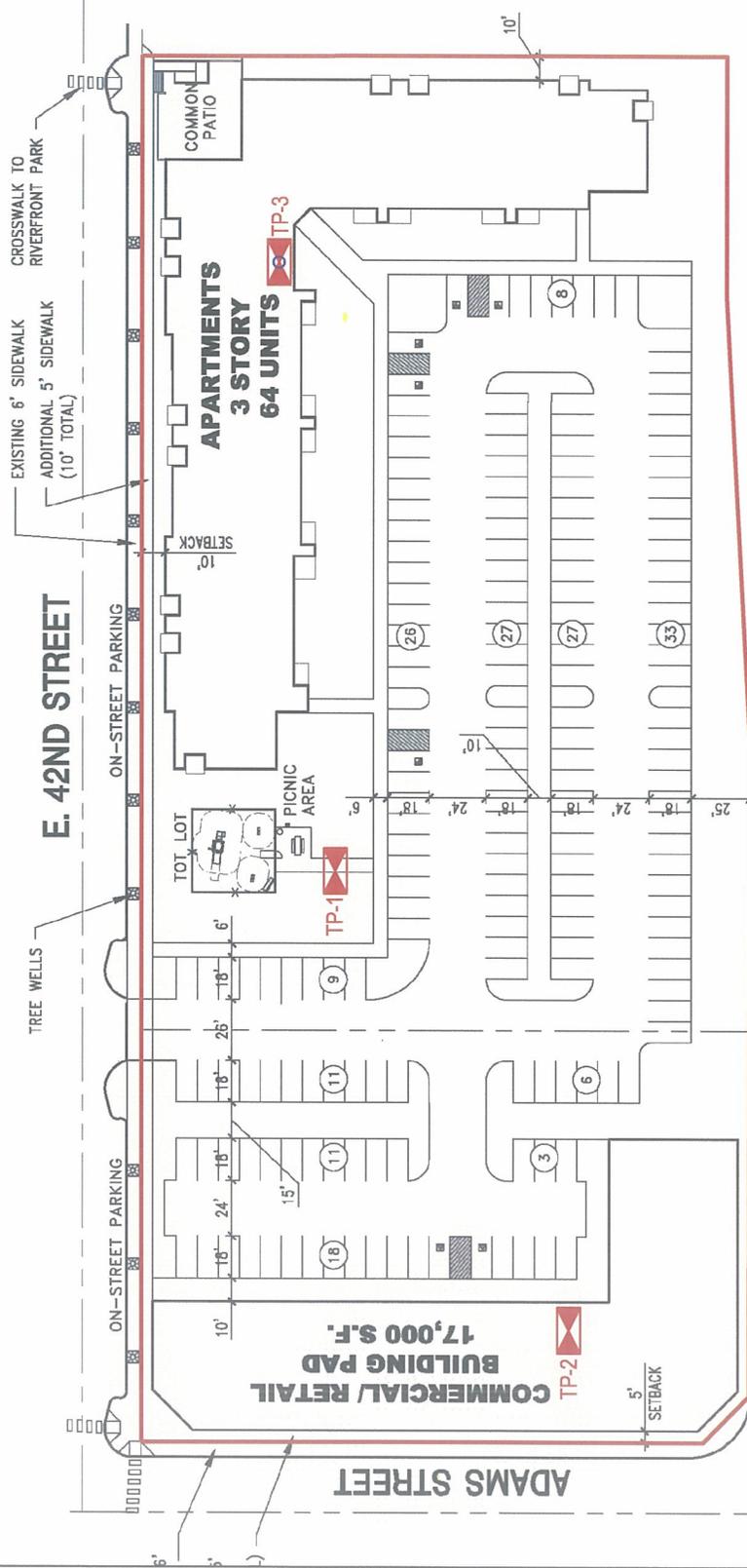
Trailwinds Development

Adams Street and 42nd Street
Garden City, ID

Modified by: MHS
27 January 2014
Drawing: B140088g



Phone: 208 376-4748
Fax: 208 322-6515
E-mail: mit@mi-id.com



VETERANS MEMORIAL PARKWAY

Prepared for:

Garden City, Idaho

Storm Drainage Calculations

Parkway Station Garden City, Idaho

Prepared by:

ROCK SOLID CIVIL

270 N. 27th Street,
Suite 100

Boise, ID 83702

208.342.3277

May 31, 2016

Project No: 16-14



**ROCK SOLID
CIVIL**

Civil Engineering Land Development Consulting

Table of Contents

Narrative 2

Figure I: Drainage Tributary Area Map 3

Figure II: Facility Spreadsheet Calculations..... 5

Storm Drainage Calculations

Parkway Station

Narrative

The Parkway Station project is located in the north corner of E. 42nd St. and N. Adams St. in Garden City, Idaho. These calculations are for the onsite private Drainage Facility #1 through #7, prepared for the Parkway Station project.

See **Figure I** for the overall drainage map and its respective drainage facility location. All enclosed drainage facilities are private PaveDrain systems to manage the onsite stormwater discharges.

See **Figure II** for Facility Spreadsheet Calculations.

Figure I: Drainage Tributary Area Map

DESIGN FACTORS:
 1. ESTIMATED GW: 6' BGS. GW ELV=44.5 (50.5-6')
 2. DESIGN SOIL INFILTRATION RATE=8 IN/HR
 3. REQUIRED SEPARATION FROM BOTTOM OF DRAINAGE FACILITY TO SHGW: 3'
 4. APROX SEWER DEPTH AT NORTH CORNER: 3' BGS (INV OUT: 47.50)



DRAINAGE FACILITY #6
 PAVEDRAIN AREA: 100'L x 2'W
 ROCK DEPTH: 2'D

DRAINAGE FACILITY #7
 PAVEDRAIN AREA: 118'L x 3'W
 ROCK DEPTH: 1.5'D

DRAINAGE FACILITY #5
 PAVEDRAIN AREA: 130'L x 3'W
 ROCK DEPTH: 1.5'D

DRAINAGE FACILITY #4
 PAVEDRAIN AREA: 167'L x 4'W
 ROCK DEPTH: 1.0'D

DRAINAGE FACILITY #3
 PAVEDRAIN AREA: 130'L x 5'W
 ROCK DEPTH: 1.5'D

BASIN #6
 (5,702 SF)

BASIN #7
 (9,317 SF)

BASIN #5
 (10,191 SF)

BASIN #4
 (14,973 SF)

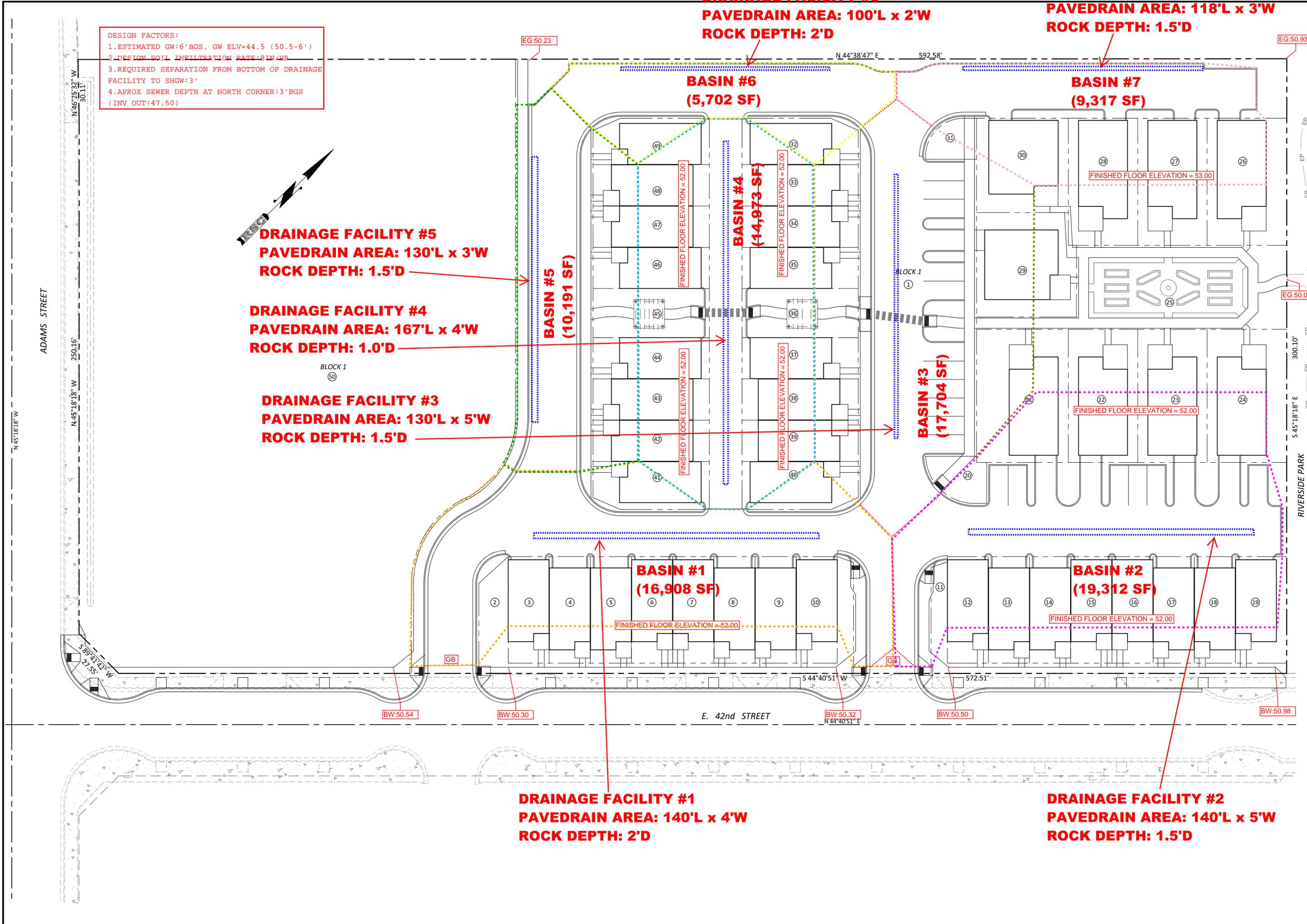
BASIN #3
 (17,704 SF)

BASIN #1
 (16,908 SF)

BASIN #2
 (19,312 SF)

DRAINAGE FACILITY #1
 PAVEDRAIN AREA: 140'L x 4'W
 ROCK DEPTH: 2'D

DRAINAGE FACILITY #2
 PAVEDRAIN AREA: 140'L x 5'W
 ROCK DEPTH: 1.5'D



HUTCHISON SMITH ARCHITECTS
 PROJECT: RSC 16-14
 FILE: Parkway DA.dwg
 DATE: Apr. 14, 2016
 DRAWN: JDF
 REVISIONS:

ROCK SOLID CIVIL
 Civil Engineering and Land Development Consulting
 270 North 27th Street, Boise, ID 83702
 Office Phone: 208.942.3277
 www.rocksolidcivil.com

Stamp
 PROFESSIONAL ENGINEER
 REGISTERED
 10692
 STATE OF IDAHO
 J.W.E. COSLETT

MIXED USE RESIDENTIAL
 PARKWAY STATION
 E. 42nd ST
 DRAINAGE BASIN MAP

SHEET NO.
DA

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Figure II: Facility Spreadsheet Calculations

parkway_sd calcs.xls
Summary

DRAINAGE SUMMARY

Drainage Basin	Area (SF)	Drainage Facility	C-Factor
Basin #1	16,908	PaveDrain #1	0.65
Basin #2	19,312	PaveDrain #2	0.65
Basin #3	17,704	PaveDrain #3	0.65
Basin #4	14,973	PaveDrain #4	0.65
Basin #5	10,191	PaveDrain #5	0.65
Basin #6	5,702	PaveDrain #6	0.65
Basin #7	9,317	PaveDrain #7	0.65

PaveDrain Calcs

Project/Location **Basin #1**

Using Zone "A" IDF Curve

Return Period?		50
Drainage Area (acres):	Area in ft ²	16,908
	Area in Acres	0.39
Runoff Coefficient (c)		0.65
Percolation Rate	Inches/Hr	8
Predevelopment Rate (if any)		cfs

Is there enough Percolation Area?	Enough Capacity?
YES	YES

(per geotechnical recommendations)

Compute Peak Volume

Storm Duration		I	Q	Runoff Vol	Percolation Vol	PreDev. Vol	V _R Required Vol
Min	Hr	in/hr	cfs	ft ³	ft ³	ft ³	ft ³
10	0.17	2.61	0.66	395	62	0	333
30	0.50	1.43	0.36	649	187	0	463
	1	0.89	0.22	808	373	0	435
	2	0.53	0.13	963	747	0	216
	3	0.40	0.10	1,087	1,120	0	-33
	6	0.25	0.06	1,335	2,240	0	-905
	12	0.14	0.04	1,526	4,480	0	-2,954
	24	0.08	0.02	1,700	8,960	0	-7,260
Runoff Vol. (ft ³)	Percol. Vol. (ft ³)	Perc. Rt. (in/hr)	Perc. Rt. (ft/day)	Required Area (ft ²)	Enter Total Design Vol.		435
435	392	8	16	24.5			

Paver Length		140 FT	
Paver Width		4 FT	
Paver Cross Sectional Storage		0.33 SF	(PaveDrain Blocks Hold 1" of Water in the Arch)
Rock Length		140 FT	
Rock Width		4 FT	
Rock Depth		2 FT	
Rock Cross Sectional Area		8.00 SF	
Rock Cross Sectional Storage		3.20 SF	(40% Voids)
Perc Length		140 FT	
Perc Width		4 FT	

Vol. Available **495 CF**
Time to Drain **2.2 Hours**

PaveDrain Calcs

Project/Location **Basin #2**

Using Zone "A" IDF Curve

Return Period?		50
Drainage Area (acres):	Area in ft ²	19,312
	Area in Acres	0.44
Runoff Coefficient (c)		0.65
Percolation Rate	Inches/Hr	8
Predevelopment Rate (if any)		cfs

Is there enough Percolation Area?	Enough Capacity?
YES	YES

(per geotechnical recommendations)

Compute Peak Volume

Storm Duration		I	Q	Runoff Vol	Percolation Vol	PreDev. Vol	V _R Required Vol
Min	Hr	in/hr	cfs	ft ³	ft ³	ft ³	ft ³
10	0.17	2.61	0.75	451	78	0	374
30	0.50	1.43	0.41	742	233	0	508
	1	0.89	0.26	923	467	0	457
	2	0.53	0.15	1,100	933	0	166
	3	0.40	0.11	1,242	1,400	0	-158
	6	0.25	0.07	1,525	2,800	0	-1,275
	12	0.14	0.04	1,743	5,600	0	-3,857
	24	0.08	0.02	1,942	11,200	0	-9,258
Runoff Vol. (ft ³)	Percol. Vol. (ft ³)	Perc. Rt. (in/hr)	Perc. Rt. (ft/day)	Required Area (ft ²)	Enter Total Design Vol.		457
457	411	8	16	25.7			

Paver Length		140 FT	
Paver Width		5 FT	
Paver Cross Sectional Storage		0.42 SF	(PaveDrain Blocks Hold 1" of Water in the Arch)
Rock Length		140 FT	
Rock Width		5 FT	
Rock Depth		1.5 FT	
Rock Cross Sectional Area		7.50 SF	
Rock Cross Sectional Storage		3.00 SF	(40% Voids)
Perc Length		140 FT	
Perc Width		5 FT	

Vol. Available **478 CF**
Time to Drain **2.0 Hours**

PaveDrain Calcs

Project/Location **Basin #3**

Using Zone "A" IDF Curve

Return Period?		50
Drainage Area (acres):	Area in ft ²	17,704
	Area in Acres	0.41
Runoff Coefficient (c)		0.65
Percolation Rate	Inches/Hr	8 (per geotechnical recommendations)
Predevelopment Rate (if any)		cfs

Is there enough Percolation Area?	Enough Capacity?
YES	YES

Compute Peak Volume

Storm Duration		I	Q	Runoff Vol	Percolation Vol	PreDev. Vol	V _R Required Vol
Min	Hr	in/hr	cfs	ft ³	ft ³	ft ³	ft ³
10	0.17	2.61	0.69	414	72	0	341
30	0.50	1.43	0.38	680	217	0	463
	1	0.89	0.24	846	433	0	413
	2	0.53	0.14	1,008	867	0	141
	3	0.40	0.11	1,138	1,300	0	-162
	6	0.25	0.06	1,398	2,600	0	-1,202
	12	0.14	0.04	1,598	5,200	0	-3,602
	24	0.08	0.02	1,780	10,400	0	-8,620
Runoff Vol. (ft ³)	Percol. Vol. (ft ³)	Perc. Rt. (in/hr)	Perc. Rt. (ft/day)	Required Area (ft ²)	Enter Total Design Vol.		413
413	372	8	16	23.2			

Paver Length		130 FT	
Paver Width		5 FT	
Paver Cross Sectional Storage		0.42 SF	(PaveDrain Blocks Hold 1" of Water in the Arch)
Rock Length		130 FT	
Rock Width		5 FT	
Rock Depth		1.5 FT	
Rock Cross Sectional Area		7.50 SF	
Rock Cross Sectional Storage		3.00 SF	(40% Voids)
Perc Length		130 FT	
Perc Width		5 FT	

Vol. Available **444 CF**
Time to Drain **2.0 Hours**

PaveDrain Calcs

Project/Location **Basin #4**

Using Zone "A" IDF Curve

Return Period?		50
Drainage Area (acres):	Area in ft ²	14,973
	Area in Acres	0.34
Runoff Coefficient (c)		0.65
Percolation Rate	Inches/Hr	8 (per geotechnical recommendations)
Predevelopment Rate (if any)		cfs

Is there enough Percolation Area?	Enough Capacity?
YES	YES

Compute Peak Volume

Storm Duration		I	Q	Runoff Vol	Percolation Vol	PreDev. Vol	V _R Required Vol
Min	Hr	in/hr	cfs	ft ³	ft ³	ft ³	ft ³
10	0.17	2.61	0.58	350	74	0	276
30	0.50	1.43	0.32	575	223	0	352
	1	0.89	0.20	716	445	0	271
	2	0.53	0.12	853	891	0	-38
	3	0.40	0.09	963	1,336	0	-373
	6	0.25	0.05	1,182	2,672	0	-1,490
	12	0.14	0.03	1,351	5,344	0	-3,993
	24	0.08	0.02	1,506	10,688	0	-9,182
Runoff Vol. (ft ³)	PreDev. Vol. (ft ³)	Perc. Rt. (in/hr)	Perc. Rt. (ft/day)	Required Area (ft ²)	Enter Total Design Vol.		271
271	243	8	16	15.2			

Paver Length		167 FT	
Paver Width		4 FT	
Paver Cross Sectional Storage		0.33 SF	(PaveDrain Blocks Hold 1" of Water in the Arch)
Rock Length		167 FT	
Rock Width		4 FT	
Rock Depth		1 FT	
Rock Cross Sectional Area		4.00 SF	
Rock Cross Sectional Storage		1.60 SF	(40% Voids)
Perc Length		167 FT	
Perc Width		4 FT	

Vol. Available **323 CF**
Time to Drain **1.6 Hours**

PaveDrain Calcs

Project/Location **Basin #5**

Using Zone "A" IDF Curve

Return Period?		50
Drainage Area (acres):	Area in ft ²	10,191
	Area in Acres	0.23
Runoff Coefficient (c)		0.65
Percolation Rate	Inches/Hr	8
Predevelopment Rate (if any)		cfs

Is there enough Percolation Area?	Enough Capacity?
YES	YES

(per geotechnical recommendations)

Compute Peak Volume

Storm Duration		I	Q	Runoff Vol	Percolation Vol	PreDev. Vol	V _R Required Vol
Min	Hr	in/hr	cfs	ft ³	ft ³	ft ³	ft ³
10	0.17	2.61	0.40	238	43	0	195
30	0.50	1.43	0.22	391	130	0	261
	1	0.89	0.14	487	260	0	227
	2	0.53	0.08	580	520	0	60
	3	0.40	0.06	655	780	0	-125
	6	0.25	0.04	805	1,560	0	-755
	12	0.14	0.02	920	3,120	0	-2,200
	24	0.08	0.01	1,025	6,240	0	-5,215
Runoff Vol. (ft ³)	Percol. Vol. (ft ³)	Perc. Rt. (in/hr)	Perc. Rt. (ft/day)	Required Area (ft ³)	Enter Total Design Vol.		227
227	205	8	16	12.8			

Paver Length		130 FT	
Paver Width		3 FT	
Paver Cross Sectional Storage		0.25 SF	(PaveDrain Blocks Hold 1" of Water in the Arch)
Rock Length		130 FT	
Rock Width		3 FT	
Rock Depth		1.5 FT	
Rock Cross Sectional Area		4.50 SF	
Rock Cross Sectional Storage		1.80 SF	(40% Voids)
Perc Length		130 FT	
Perc Width		3 FT	

Vol. Available **266 CF**
Time to Drain **1.9 Hours**

PaveDrain Calcs

Project/Location Basin #6

Using Zone "A" IDF Curve

Return Period?		50
Drainage Area (acres):	Area in ft ²	5,702
	Area in Acres	0.13
Runoff Coefficient (c)		0.65
Percolation Rate	Inches/Hr	8
Predevelopment Rate (if any)		cfs

Is there enough Percolation Area?	Enough Capacity?
YES	YES

(per geotechnical recommendations)

Compute Peak Volume

Storm Duration		I	Q	Runoff Vol	Percolation Vol	PreDev. Vol	V _R Required Vol
Min	Hr	in/hr	cfs	ft ³	ft ³	ft ³	ft ³
10	0.17	2.61	0.22	133	22	0	111
30	0.50	1.43	0.12	219	67	0	152
	1	0.89	0.08	273	133	0	139
	2	0.53	0.05	325	267	0	58
	3	0.40	0.03	367	400	0	-33
	6	0.25	0.02	450	800	0	-350
	12	0.14	0.01	515	1,600	0	-1,085
	24	0.08	0.01	573	3,200	0	-2,627
Runoff Vol. (ft ³)	Percol. Vol. (ft ³)	Perc. Rt. (in/hr)	Perc. Rt. (ft/day)	Required Area (ft ²)	Enter Total Design Vol.		139
139	125	8	16	7.8			

Paver Length	100 FT
Paver Width	2 FT
Paver Cross Sectional Storage	0.17 SF (PaveDrain Blocks Hold 1" of Water in the Arch)
Rock Length	100 FT
Rock Width	2 FT
Rock Depth	2 FT
Rock Cross Sectional Area	4.00 SF
Rock Cross Sectional Storage	1.60 SF (40% Voids)
Perc Length	100 FT
Perc Width	2 FT

Vol. Available **177 CF**
Time to Drain **2.0 Hours**

PaveDrain Calcs

Project/Location **Basin #7**

Using Zone "A" IDF Curve

Return Period?		50
Drainage Area (acres):	Area in ft ²	9,317
	Area in Acres	0.21
Runoff Coefficient (c)		0.65
Percolation Rate	Inches/Hr	8 (per geotechnical recommendations)
Predevelopment Rate (if any)		cfs

Is there enough Percolation Area?	Enough Capacity?
YES	YES

Compute Peak Volume

Storm Duration		I	Q	Runoff Vol	Percolation Vol	PreDev. Vol	V _R Required Vol
Min	Hr	in/hr	cfs	ft ³	ft ³	ft ³	ft ³
10	0.17	2.61	0.36	218	39	0	178
30	0.50	1.43	0.20	358	118	0	240
	1	0.89	0.12	445	236	0	209
	2	0.53	0.07	531	472	0	59
	3	0.40	0.06	599	708	0	-109
	6	0.25	0.03	736	1,416	0	-680
	12	0.14	0.02	841	2,832	0	-1,991
	24	0.08	0.01	937	5,664	0	-4,727
Runoff Vol. (ft ³)	Percol. Vol. (ft ³)	Perc. Rt. (in/hr)	Perc. Rt. (ft/day)	Required Area (ft ²)	Enter Total Design Vol.		209
209	189	8	16	11.8			

Paver Length		118 FT	
Paver Width		3 FT	
Paver Cross Sectional Storage		0.25 SF	(PaveDrain Blocks Hold 1" of Water in the Arch)
Rock Length		118 FT	
Rock Width		3 FT	
Rock Depth		1.5 FT	
Rock Cross Sectional Area		4.50 SF	
Rock Cross Sectional Storage		1.80 SF	(40% Voids)
Perc Length		118 FT	
Perc Width		3 FT	

Vol. Available **242 CF**
Time to Drain **1.9 Hours**

Mr. Doug Crowther
Parkway Station, LLC
PO Box 50111
Boise, ID 83705
208-863-9517

Re: Limited Geotechnical Engineering Report
Parkway Station Mixed-Use Development
4232 Adams Street
Boise, ID

Dear Mr. Crowther:

In compliance with your instructions, MTI has conducted a limited soils exploration for the above referenced development. Fieldwork for this investigation was conducted on 30 November 2015. The proposed development is in the northern portion of the City of Garden City, Ada County, ID, and occupies a portion of the SE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 32, Township 4 North, Range 2 East, Boise Meridian. This project is expected to consist of 6 multi-unit townhome structures, 1 apartment building, 9 cottages, and 2 commercial structures, to be developed with spread/continuous footings and concrete floor slabs. Residential structures are to be wood framed and 3 to 4 stories in height. Commercial structures will be steel stud and are anticipated to be single-story. The site to be developed is approximately 4.2 acres in size. In addition, light and heavy duty paved areas will be developed for both access and parking. Per your request, the scope of this initial investigation was to determine groundwater and site drainage information.

Authorization

Authorization to perform this exploration and analysis was given in the form of a written authorization to proceed from Mr. Doug Crowther of Parkway Station, LLC to Monica Saculles of Materials Testing and Inspection, Inc. (MTI), on 23 November 2015. Said authorization is subject to terms, conditions, and limitations described in the Professional Services Contract entered into between Parkway Station, LLC and MTI. Our scope of services for the proposed development has been provided in our proposal dated 13 November 2015.

Scope of Investigation

The scope of this investigation included review of geologic literature and existing available geotechnical studies of the area, visual site reconnaissance of the immediate site, subsurface exploration of the site, field and laboratory testing of materials collected, and engineering analysis and evaluation of. At this time our scope of work does not include foundation design, pavement design, or earthwork recommendations.

Regional Geology

The project site is located within the western Snake River Plain of southwestern Idaho and eastern Oregon. The plain is a northwest trending rift basin, about 45 miles wide and 200 miles long, that developed about 14 million years ago (Ma) and has since been occupied sporadically by large inland lakes. Geologic materials found within and along the plain's margins reflect volcanic and fluvial/lacustrine sedimentary processes that have led to an accumulation of approximately 1 to 2 km of interbedded volcanic and sedimentary deposits within the plain. Along the margins of the plain, streams that drained the highlands to the north and south provided coarse to fine-grained sediments eroded from granitic and volcanic rocks, respectively. About 2 million years ago the last of the lakes was drained and since that time fluvial erosion and deposition has dominated the evolution of the landscape. The project site is underlain by "Alluvium of Boise River" as mapped by Othberg and Stanford (1993). These Holocene (10,000 years ago to present) age deposits accumulated as the result of stream processes on low-lying river beds, flood plains and alluvial fans. Deposits are composed of sandy cobble gravel upstream grading to sandy pebble gravel downstream and typically contain no pedogenic clay. Gravel deposits underlie the flood plain of the Boise River to depths of 23-35 feet and overlie a surface cut by the river into earlier Tertiary basin-fill sediments.

General Site Characteristics

This proposed development consists of approximately 4.2 acres of relatively flat and level terrain. Throughout the majority of the site, surficial materials consist of sand-gravel fill mixtures. Vegetation primarily consists of mature trees and limited landscape grasses.

Regional drainage is north and west toward the Boise River. Stormwater drainage for the site is achieved by percolation through surficial soils. The site is situated so that it is unlikely that it will receive any stormwater drainage from off-site sources. Stormwater drainage collection and retention systems are in place on the project site and currently exist in adjacent roadways in the form of drop inlets.

Exploration and Sampling Procedures

Field exploration conducted to determine engineering characteristics of subsurface materials included a reconnaissance of the project site and investigation by test pit. Test pit sites were located in the field by means of a Global Positioning System (GPS) device and are reportedly accurate to within sixteen feet. Upon completion of investigation, each test pit was backfilled with loose excavated materials. Re-excavation and compaction of these test pit areas are required prior to construction of overlying structures.

In addition, samples were obtained from representative soil strata encountered. Samples obtained have been visually classified in the field by professional staff, identified according to test pit number and depth, placed in sealed containers, and transported to our office. Subsurface materials have been described in detail on logs provided in the **Enclosures** section. Results of field are also presented in the **Enclosures** section. MTI recommends that these logs **not** be used to estimate fill material quantities.

Soil and Sediment Profile

The profile below represents a generalized interpretation for the project site. Note that on site soils strata, encountered between test pit locations, may vary from the individual soil profiles presented in the logs, which can be found in the **Enclosures** section.

The materials encountered during exploration were quite typical for the geologic area mapped as Alluvium of Boise River. Surficial materials were predominately poorly graded gravel with sand fills and silty sand fills. Poorly graded gravel with sand fills were light brown, dry, medium dense to dense, and contained fine to coarse-grained sand and 3-inch-minus cobbles. Silty sand fills were brown, dry, medium dense, and contained fine-grained sand. Underlying the surficial fill materials, silty sand sediments were encountered. Silty sands were dark brown, slightly moist, medium dense, and contained fine to medium-grained sand. At depth across the site poorly graded gravel with sand sediments were encountered with a few occurrences of poorly graded sand sediments. Poorly graded gravel and sand sediments were tan to light brown, dry to saturated, medium dense, and contained fine to coarse-grained sand, fine to coarse gravel, and 8-inch-minus cobbles.

Test pit walls exhibited moderate to significant sloughing. However, moisture contents will also affect wall competency with saturated soils having a tendency to readily slough when under load and unsupported.

Groundwater

During this field investigation, groundwater was encountered in test pits at depths ranging from 8.4 to 9.9 feet bgs. Actual groundwater depths varied with topography and distance from the Boise River to the north of the project site. Soil moistures in the test pits were generally dry to slightly moist within surficial soils. Within the poorly graded gravels, soil moistures graded from slightly moist to saturated as the water table was approached and penetrated.

In the vicinity of the project site, groundwater levels are controlled in large part by the stage and flow of the Boise River. Maximum groundwater elevations likely occur during late spring to early summer runoff season. During previous investigations performed in March 2005, June 2007, June 2011, and January 2014 within approximately 1/2-mile to the southeast and south of the project site, groundwater was encountered within numerous borings and test pits at depths ranging from 6.2 to 9.1 feet bgs. Furthermore, according groundwater monitoring data collected by MTI at the Trailwinds project directly to the southeast of the project site, groundwater was encountered as shallow as 6.8 feet bgs.

Based on evidence of this investigation and background knowledge of the area, MTI estimates groundwater depths to remain greater than approximately 5.8 feet bgs throughout the year. This depth can be confirmed through long-term groundwater monitoring.

Soil Infiltration Rates

Soil permeability, which is a measure of the ability of a soil to transmit a fluid, was not tested in the field. Given the absence of direct measurements, for this report an estimation of infiltration is presented using generally recognized values for each soil type and gradation. Of soils comprising the generalized soil profile for this study, silty sand sediments usually display rates of 4 to 8 inches per hour. Poorly graded sand and gravel sediments typically exhibit infiltration values in excess of 12 inches per hour.

It is recommended that infiltration facilities constructed on the site be extended into native poorly graded gravel or sand sediments. Excavation depths of approximately 2 to 4 feet bgs should be anticipated to expose these poorly graded gravel with sand sediments. Because of the high soil permeability, ASTM C33 filter sand, or equivalent, should be incorporated into design of infiltration facilities. An infiltration rate of 8 inches per hour should be used in design. Actual infiltration rates should be confirmed at the time of construction.

Warranty and Limiting Conditions

MTI warrants that findings and conclusions contained herein have been formulated in accordance with generally accepted professional engineering practice in the fields of foundation engineering, soil mechanics, and engineering geology only for the site and project described in this report. These engineering methods have been developed to provide the client with information regarding apparent or potential engineering conditions relating to the site within the scope cited above and are necessarily limited to conditions observed at the time of the site visit and research. Field observations and research reported herein are considered sufficient in detail and scope to form a reasonable basis for the purposes cited above.

Exclusive Use

This report was prepared for exclusive use of the property owner(s), at the time of the report, and their retained design consultants (“Client”). Conclusions and recommendations presented in this report are based on the agreed-upon scope of work outlined in this report together with the Contract for Professional Services between the Client and Materials Testing and Inspection, Inc. (“Consultant”). Use or misuse of this report, or reliance upon findings hereof, by parties other than the Client is at their own risk. Neither Client nor Consultant make representation of warranty to such other parties as to accuracy or completeness of this report or suitability of its use by such other parties for purposes whatsoever, known or unknown, to Client or Consultant. Neither Client nor Consultant shall have liability to indemnify or hold harmless third parties for losses incurred by actual or purported use or misuse of this report. No other warranties are implied or expressed.

Report Recommendations are Limited and Subject to Misinterpretation

There is a distinct possibility that conditions may exist that could not be identified within the scope of the investigation or that were not apparent during our site investigation. Findings of this report are limited to data collected from noted explorations advanced and do not account for unidentified fill zones, unsuitable soil types or conditions, and variability in soil moisture and groundwater conditions. To avoid possible misinterpretations of findings, conclusions, and implications of this report, MTI should be retained to explain the report contents to other design professionals as well as construction professionals.

Since actual subsurface conditions on the site can only be verified by earthwork, note that construction recommendations are based on general assumptions from selective observations and selective field exploratory sampling. Upon commencement of construction, such conditions may be identified that require corrective actions, and these required corrective actions may impact the project budget. Therefore, construction recommendations in this report should be considered preliminary, and MTI should be retained to observe actual subsurface conditions during earthwork construction activities to provide additional construction recommendations as needed.

Since geotechnical reports are subject to misinterpretation, **do not** separate the soil logs from the report. Rather, provide a copy of, or authorize for their use, the complete report to other design professionals or contractors. Locations of exploratory sites referenced within this report should be considered approximate locations only. For more accurate locations, services of a professional land surveyor are recommended.

This report is also limited to information available at the time it was prepared. In the event additional information is provided to MTI following publication of our report, it will be forwarded to the client for evaluation in the form received.

Environmental Concerns

Comments in this report concerning either onsite conditions or observations, including soil appearances and odors, are provided as general information. These comments are not intended to describe, quantify, or evaluate environmental concerns or situations. Since personnel, skills, procedures, standards, and equipment differ, a geotechnical investigation report is not intended to substitute for a geoenvironmental investigation or a Phase II/III Environmental Site Assessment. If environmental services are needed, MTI can provide, via a separate contract, those personnel who are trained to investigate and delineate soil and water contamination.

General Comments

Often, questions arise concerning soil conditions because of design and construction details that occur on a project. MTI would be pleased to continue our role as geotechnical engineers during project implementation. Additionally, MTI can provide materials testing and special inspection services during construction of this project. If you will advise us of the appropriate time to discuss these engineering services, we will meet with you at your convenience.

Environmental Services

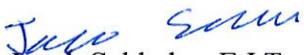
Geotechnical Engineering

Construction Materials Testing

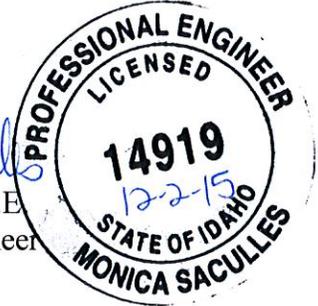
Special Inspections

MTI appreciates this opportunity to be of service to you and looks forward to working with you in the future. If you have questions, please call (208) 376-4748.

Respectfully Submitted,
Materials Testing & Inspection, Inc.


Jacob Schlador, E.I.T.
Staff Engineer

Reviewed by: 
Monica Saculles, P.E.
Geotechnical Engineer



Enclosures:
Geotechnical General Notes
Geotechnical Investigation Test Pit Logs
Vicinity Map
Site Map

GEOTECHNICAL GENERAL NOTES

RELATIVE DENSITY AND CONSISTENCY CLASSIFICATION			
Coarse-Grained Soils	SPT Blow Counts (N)	Fine-Grained Soils	SPT Blow Counts (N)
Very Loose:	< 4	Very Soft:	< 2
Loose:	4-10	Soft:	2-4
Medium Dense:	10-30	Medium Stiff:	4-8
Dense:	30-50	Stiff:	8-15
Very Dense:	>50	Very Stiff:	15-30
		Hard:	>30

Moisture Content	
Description	Field Test
Dry	Absence of moisture, dusty, dry to touch
Moist	Damp but not visible moisture
Wet	Visible free water, usually soil is below water table

Cementation	
Description	Field Test
Weakly	Crumbles or breaks with handling or slight finger pressure
Moderately	Crumbles or breaks with considerable finger pressure
Strongly	Will not crumble or break with finger pressure

PARTICLE SIZE					
Boulders:	>12 in.	Coarse-Grained Sand:	5 to 0.6 mm	Silts:	0.075 to 0.005 mm
Cobbles:	12 to 3 in.	Medium-Grained Sand:	0.6 to 0.2 mm	Clays:	<0.005 mm
Gravel:	3 in. to 5 mm	Fine-Grained Sand:	0.2 to 0.075 mm		

UNIFIED SOIL CLASSIFICATION SYSTEM			
Major Divisions		Symbol	Soil Descriptions
Coarse-Grained Soils <50% passes No.200 sieve	Gravel & Gravelly Soils <50% coarse fraction passes No.4 sieve	GW	Well-graded gravels; gravel/sand mixtures with little or no fines
		GP	Poorly-graded gravels; gravel/sand mixtures with little or no fines
		GM	Silty gravels; poorly-graded gravel/sand/silt mixtures
		GC	Clayey gravels; poorly-graded gravel/sand/clay mixtures
	Sand & Sandy Soils >50% coarse fraction passes No.4 sieve	SW	Well-graded sands; gravelly sands with little or no fines
		SP	Poorly-graded sands; gravelly sands with little or no fines
		SM	Silty sands; poorly-graded sand/gravel/silt mixtures
		SC	Clayey sands; poorly-graded sand/gravel/clay mixtures
Fine Grained Soils >50% passes No.200 sieve	Silts & Clays LL < 50	ML	Inorganic silts; sandy, gravelly or clayey silts
		CL	Lean clays; inorganic, gravelly, sandy, or silty, low to medium-plasticity clays
		OL	Organic, low-plasticity clays and silts
	Silts & Clays LL > 50	MH	Inorganic, elastic silts; sandy, gravelly or clayey elastic silts
		CH	Fat clays; high-plasticity, inorganic clays
		OH	Organic, medium to high-plasticity clays and silts
Highly Organic Soils	PT	Peat, humus, hydric soils with high organic content	

GEOTECHNICAL INVESTIGATION TEST PIT LOG
Test Pit Log #: TP-1 **Date Advanced:** 30 Nov 2015 **Logged by:** Monica Saculles, P.E.

Excavated by: Struckman's Backhoe Service

Location: See Site Map Plates

Latitude: 43.63538

Longitude: -116.24606

Depth to Water Table: 8.4 Feet bgs

Total Depth: 9.0 Feet bgs

Depth (Feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (Feet bgs)	Qp	Lab Test ID
0.0-0.9	Silty Sand Fill (SM-FILL): <i>Brown, dry, medium dense, with fine-grained sand.</i> --Surficial gravel layer encountered. --Top 2 to 4 inches were frozen.				
0.9-1.7	Silty Sand (SM): <i>Dark brown, slightly moist, medium dense, with fine to medium-grained sand.</i> --Organics present throughout.				
1.7-5.6	Poorly Graded Sand (SP): <i>Tan, dry to slightly moist, medium dense, with fine-grained sand.</i> --Iron staining was present throughout.				
5.6-9.0	Poorly Graded Gravel with Sand (GP): <i>Tan to light brown, slightly moist to saturated, medium dense, with fine to coarse-grained sand, fine to coarse gravel, and 8-inch-minus cobbles.</i>				

GEOTECHNICAL INVESTIGATION TEST PIT LOG

Test Pit Log #: TP-2 **Date Advanced:** 30 Nov 2015 **Logged by:** Monica Sacules, P.E.

Excavated by: Struckman's Backhoe Service **Location:** See Site Map Plates

Latitude: 43.63527 **Longitude:** -116.24656

Depth to Water Table: 9.9 Feet bgs **Total Depth:** 10.2 Feet bgs

Depth (Feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (Feet bgs)	Qp	Lab Test ID
0.0-1.2	Poorly Graded Gravel with Sand Fill (GP-FILL): <i>Light brown, dry, medium dense, with fine to coarse-grained sand and ¾-inch-minus gravel.</i> <i>--Top 4 to 6 inches were frozen.</i>				
1.2-2.8	Silty Sand (SM): <i>Dark brown, slightly moist, medium dense, with fine to medium-grained sand.</i>				
2.8-10.2	Poorly Graded Gravel with Sand (GP): <i>Tan to light brown, slightly moist to saturated, medium dense, with fine to coarse-grained sand, fine to coarse gravel, 8-inch-minus cobbles, and occasional 12-inch-minus cobbles.</i>				

GEOTECHNICAL INVESTIGATION TEST PIT LOG

Test Pit Log #: TP-3 **Date Advanced:** 30 Nov 2015 **Logged by:** Monica Saculles, P.E.

Excavated by: Struckman's Backhoe Service

Location: See Site Map Plates

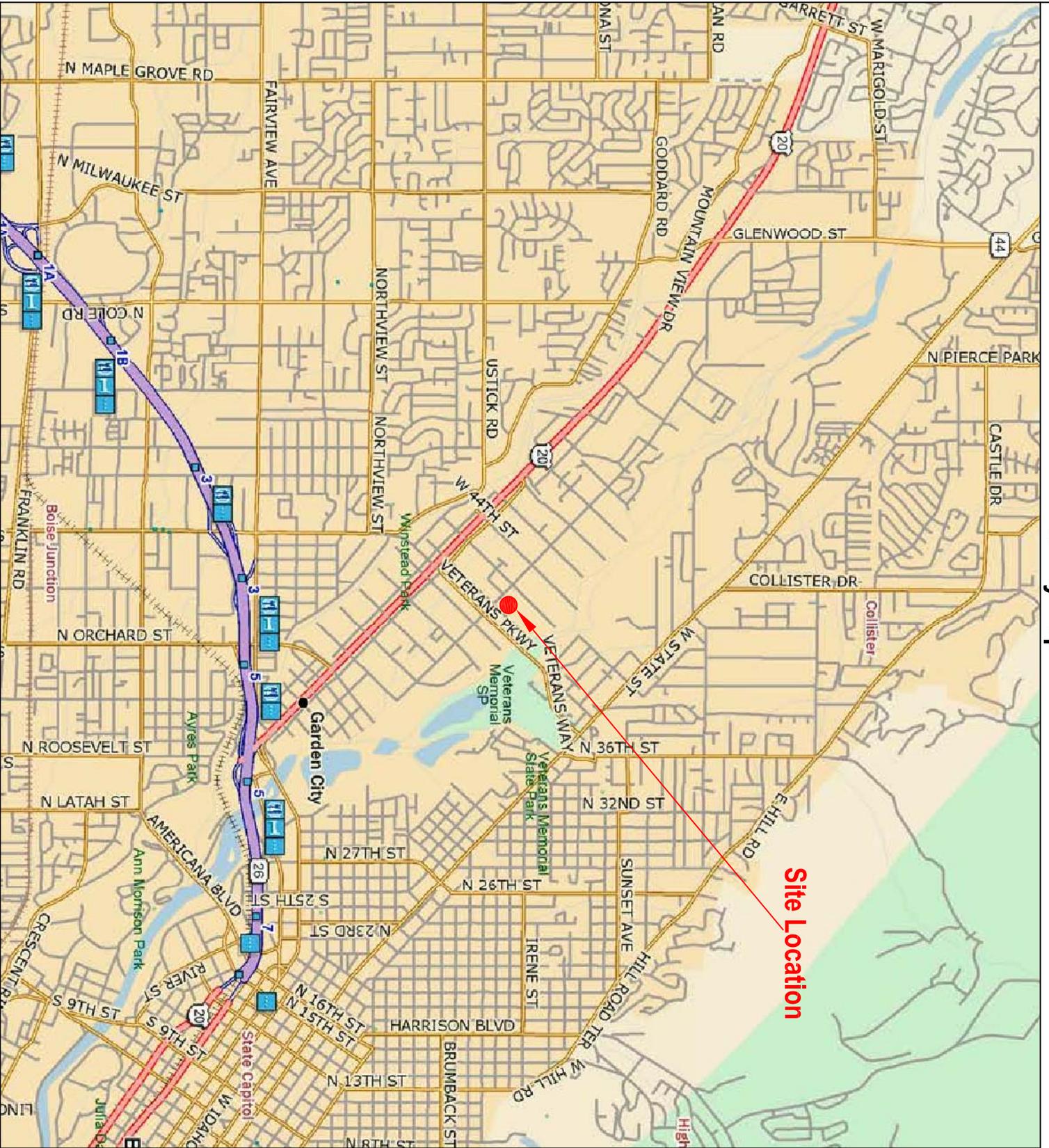
Latitude: 43.63495

Longitude: -116.24708

Depth to Water Table: 9.5 Feet bgs

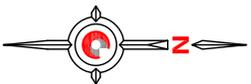
Total Depth: 9.5 Feet bgs

Depth (Feet bgs)	Field Description and USCS Soil and Sediment Classification	Sample Type	Sample Depth (Feet bgs)	Qp	Lab Test ID
0.0-1.4	Poorly Graded Gravel with Sand Fill (GP-FILL): <i>Light brown, dry, dense, with fine to coarse-grained sand, and 3-inch-minus cobbles.</i> <i>--Top 6 inches were frozen.</i>				
1.4-4.2	Silty Sand (SM): <i>Dark brown, slightly moist, medium dense, with fine to medium-grained sand.</i> <i>--Encountered an abandoned PVC pipe at 1.4 feet bgs and an abandoned electrical line at 4.1 feet bgs.</i>				
4.2-6.4	Poorly Graded Sand with Gravel (SP): <i>Tan, slightly moist, medium dense, with fine to medium-grained sand.</i> <i>--Iron staining encountered throughout.</i>				
6.4-9.5	Poorly Graded Gravel with Sand (GP): <i>Tan to light brown, slightly moist to saturated, medium dense, with fine to coarse-grained sand, fine to coarse gravel, 8-inch-minus cobbles, and occasional 12-inch-minus cobbles.</i>				



- MAP NOTES:**
- Delorme Street Atlas
 - Not to Scale

- LEGEND**
- Approximate Site Location



Parkway Station
4232 Addams Street
Boise, ID

Modified from Delorme by: JBS
2 December 2015
Drawing: B151299g



2791 S. Victory View Way
Boise, ID 83709-2835
Phone: 208 376-4748
Fax: 208 322-6515
E-mail: ml@mthd.com

NOTES:

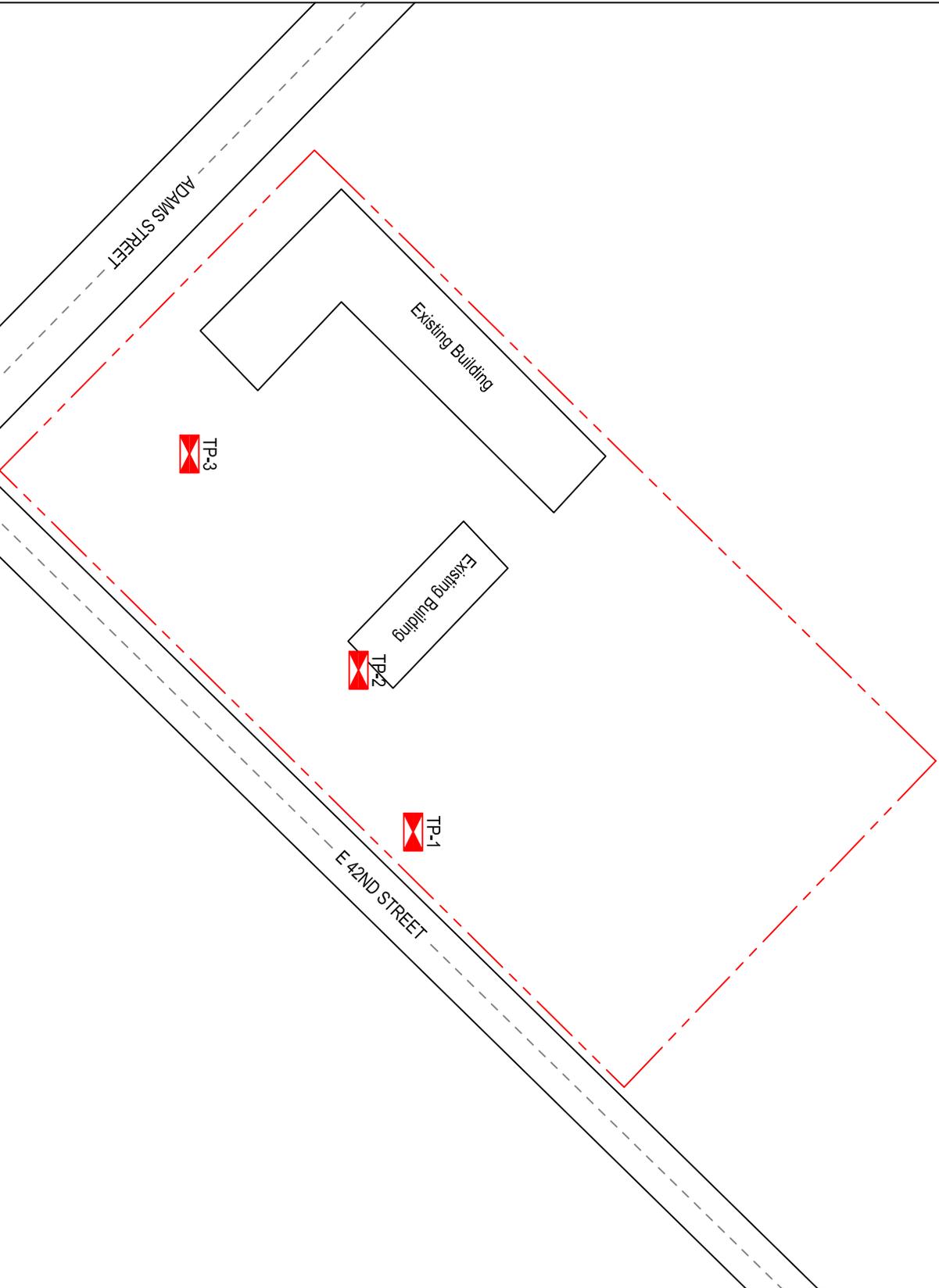
- Not to Scale

LEGEND

Approximate Site Boundary



Approximate MTI Test Pit Location



Parkway Station
4232 Adams Street
Boise, ID

Drawn by: JBS
2 December 2015
Drawing: B151299g



**MATERIALS
TESTING &
INSPECTION**

2791 S. Victory View Way
Boise, ID 83709-2835

Phone: 208 376-4748
Fax: 208 322-6515
E-mail: mti@mti-hd.com

FINAL PLAT FOR PARKWAY STATION

LEGEND

	SECTION LINE
	CENTERLINE
	RIGHT OF WAY LINE
	EXISTING DEED OR LOT LINE
	EXISTING EASEMENT
	PROPERTY BOUNDARY
	FOUND ALUMINUM CAP MONUMENT
	FOUND 5/8" REBAR AS NOTED
	FOUND 1/2" REBAR AS NOTED
	CALCULATION POINT, NOTHING FOUND, NOTHING SET
	LOT LINE
	NEW EASEMENT LINE
	SETBACK LINE
	SET 5/8" REBAR, PLS 14221
	SET 1/2" REBAR, PLS 14221
	RECORD INFORMATION
	WITNESS CORNER
	LOT NUMBER
	BLOCK NUMBER

NOTES

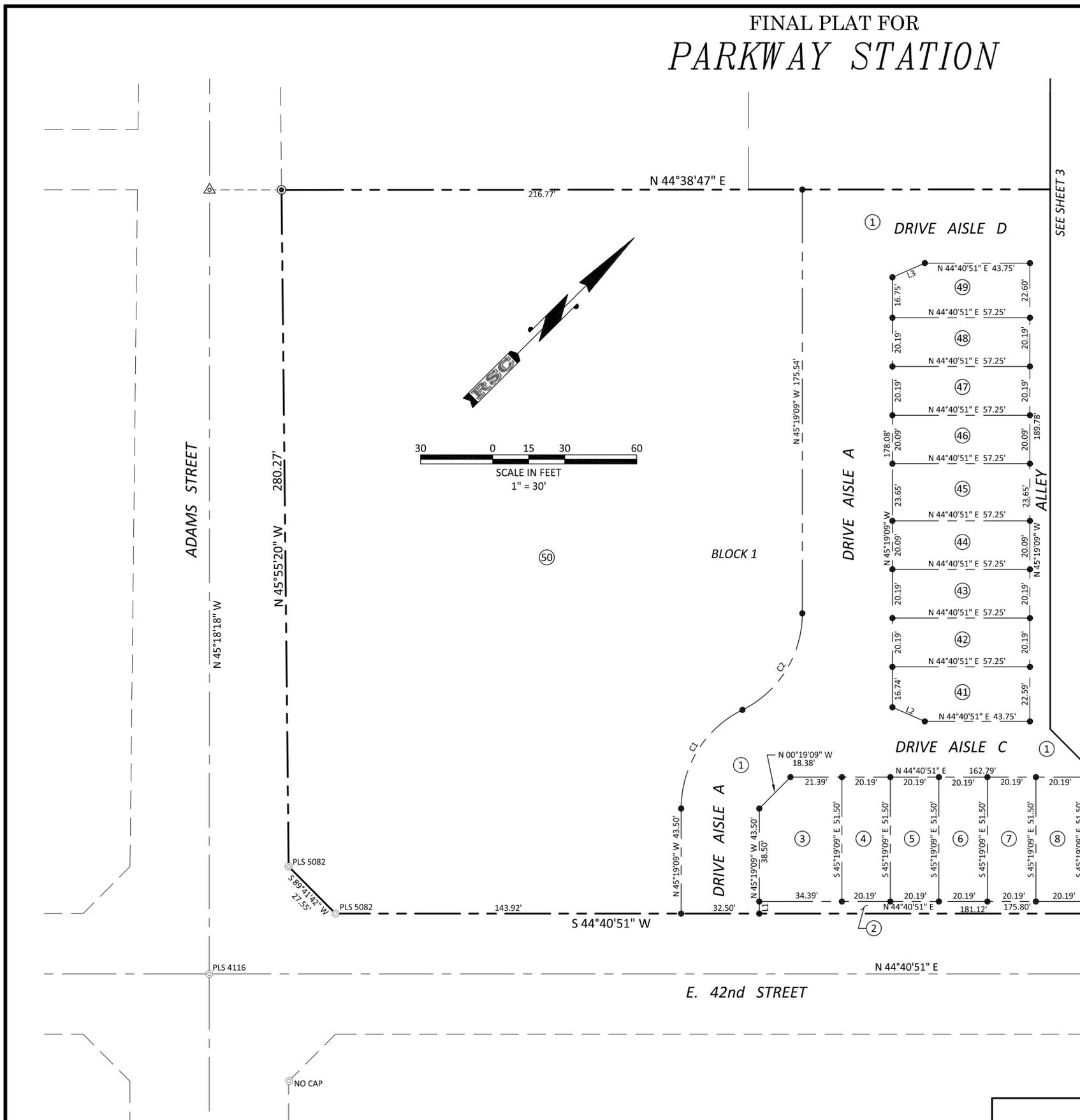
- MINIMUM BUILDING SETBACKS SHALL BE IN ACCORDANCE WITH THE GARDEN CITY APPLICABLE ZONING AND SUBDIVISION REGULATIONS AT THE TIME OF ISSUANCE OF INDIVIDUAL BUILDING PERMITS OR AS SPECIFICALLY APPROVED AND/OR REQUIRED, OR AS SHOWN ON THIS PLAT.
- MINIMUM BUILDING SETBACK LINES SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
FRONT: 10-FEET MAXIMUM*
REAR: 0-FEET (FACING DRIVEWAYS)
SIDE: 0-FEET TO 3-FEET BETWEEN UNITS
STREET SIDE: 0-FEET FACING PRIVATE STREET OR COMMON AREA
* FOR LOTS 21-24, 26-30 FACING THE COMMUNITY GARDEN (LOT 25), A 13-FOOT FRONT SETBACK IS PERMITTED.
- ANY RESUBDIVISION OF THIS PLAT SHALL COMPLY WITH THE APPLICABLE REGULATIONS IN EFFECT AT THE TIME OF RESUBDIVISION.
- LOT 50, BLOCK 1 IS HEREBY DESIGNATED AS HAVING A PERMANENT PUBLIC UTILITIES, DRAINAGE AND IRRIGATION EASEMENT OVER THE TEN (10) FEET CONTIGUOUS TO AND PARALLEL WITH LOT 1. HOWEVER, THIS SHALL NOT PRECLUDE THE CONSTRUCTION OF PROPER HARD SURFACE DRIVEWAYS FOR ACCESS TO LOT 50.
- LOT 1, BLOCK 1 IS PROPOSED TO PROVIDE A BLANKET PERMANENT PUBLIC UTILITIES, DRAINAGE AND SHARED DRIVEWAY, CROSS ACCESS & EMERGENCY ACCESS EASEMENT.
- ALL LOTS IN THIS SUBDIVISION ARE SINGLE FAMILY RESIDENTIAL EXCEPT FOR LOTS 1, 2, 11, 20, 25, 31, 36 AND 45 OF BLOCK 1 WHICH ARE COMMON LOTS THAT SHALL BE OWNED AND MAINTAINED BY THE PARKWAY STATION HOMEOWNER'S ASSOCIATION. THESE LOTS CANNOT BE DEVELOPED FOR RESIDENTIAL PURPOSES IN THE FUTURE.
- THE DEVELOPMENT OF THIS PROPERTY SHALL BE IN COMPLIANCE WITH THE GARDEN CITY ZONING ORDINANCE OR AS SPECIFICALLY APPROVED BY CAR13-00013 AND CFH 13-00027.
- ONLY DESIGNATED VEHICLE ACCESS CURB CUTS SHOWN ON THE FINAL PLAT ARE PERMITTED.
- COVENANTS, CONDITIONS AND RESTRICTIONS (CC&Rs) FOR THIS SUBDIVISION ARE RECORDED AS INST. NO. _____.

LINE TABLE

LINE	BEARING	DISTANCE
L1	N 45°19'09" W	5.00'
L2	N 68°06'46" E	14.71'
L3	N 21°14'56" E	14.71'
L4	N 45°19'09" W	9.37'
L5	N 05°16'31" E	6.89'
L6	N 73°33'53" E	6.08'
L7	N 21°14'56" E	14.71'
L8	N 68°06'46" E	14.71'
L9	N 45°19'09" W	9.37'
L10	N 84°05'11" E	6.89'
L11	N 45°18'18" W	5.00'
L12	N 06°05'25" W	2.32'
L13	N 44°40'51" E	1.85'
L14	N 00°19'09" W	2.12'
L15	N 45°19'09" W	18.50'
L16	N 44°40'51" E	4.85'
L17	N 45°19'09" W	3.00'
L18	N 44°40'51" E	4.00'
L19	N 44°40'51" E	6.50'
L20	N 45°19'09" W	6.47'
L21	N 10°50'00" E	6.62'
L22	N 45°19'09" W	1.26'
L23	N 44°40'51" E	24.96'
L24	N 45°19'09" W	19.76'
L25	N 44°40'51" E	22.99'

CURVE TABLE

CURVE	ARC LENGTH	DELTA ANGLE	RADIUS	CHORD BEARING	CHORD LENGTH
C1	50.75'	63°54'36"	45.50'	N 13°21'51" W	48.16'
C2	49.64'	63°54'36"	44.50'	N 13°21'51" W	47.10'
C3	36.29'	78°27'27"	26.50'	N 83°54'35" E	33.52'
C4	29.06'	90°00'00"	18.50'	N 00°19'09" W	26.16'



SEE SHEET 3

SEE SHEET 3



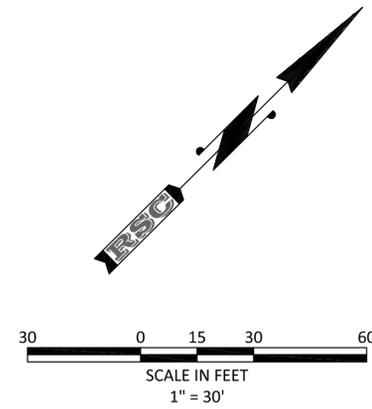
ROCK SOLID CIVIL
Civil Engineering and Land Development Consulting
270 North 27th Street, Boise, ID 83702
Office Phone: 208.342.3277
www.rocksolidcivil.com

SAWTOOTH
Land Surveying, LLC
EMMETT, IDAHO

2030 S. WASHINGTON AVE.
EMMETT, ID 83617
(208) 398-8104
FAX (208) 398-8105
WWW.SAWTOOTHLS.COM

SHEET:	DATE:	DRAWN BY:	CHECKED BY:	JOB#:	DWG#:
2 OF 5	05/14/2016	JDF	CP	16054	16054-FP

FINAL PLAT FOR PARKWAY STATION



SEE SHEET 2 FOR LEGEND
AND LINE & CURVE TABLES

ROCK SOLID CIVIL
Civil Engineering and Land Development Consulting
270 North 27th Street, Boise, ID 83702
Office Phone: 208.342.3277
www.rocksolidcivil.com

2030 S. WASHINGTON AVE.
EMMETT, ID 83617
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SAWTOOTH
Land Surveying, LLC
EMMETT, IDAHO

SHEET:	DATE:	DRAWN BY:	CHECKED BY:	JOB#:	DWG#:
3 OF 5	05/14/2016	JDF	CP	16054	16054-FP

FINAL PLAT FOR
PARKWAY STATION

BOOK _____, PAGE _____.

CERTIFICATE OF OWNER

KNOW ALL MEN BY THESE PRESENTS:

THAT WE THE UNDERSIGNED DO HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE REAL PROPERTY AS DESCRIBED BELOW AND IT IS OUR INTENTION TO INCLUDE SAID PROPERTY IN THIS SUBDIVISION PLAT.

THE OWNERS FURTHER CERTIFY, THAT ALL LOTS IN THIS SUBDIVISION WILL RECEIVE DOMESTIC WATER FROM CITY OF GARDEN CITY, INCORPORATED AND THAT CITY OF GARDEN CITY, HAS AGREED IN WRITING TO SERVE ALL OF THE LOTS IN THIS SUBDIVISION. (I.C. 50-1334)

THE EASEMENTS AS SHOWN ON THIS PLAT ARE NOT DEDICATED TO THE PUBLIC, HOWEVER THE RIGHT TO USE SAID EASEMENTS IS HEREBY PERPETUALLY RESERVED FOR PUBLIC UTILITIES AND FOR ANY OTHER USES AS DESIGNATED HEREON, AND NO PERMANENT STRUCTURES ARE TO BE ERECTED WITHIN THE LINES OF SAID EASEMENTS.

LEGAL DESCRIPTION

A parcel of land being all of Lots 1-6, Block 17 of Fairview Acres Subdivision No. 3, as shown on file in Book _____ of Plats at Page 617, Ada County Records, and located in the SE1/4 of the SW1/4 of Section 32, T. 4 N., R. 2 E., B.M., City of Garden City, Ada County, Idaho, more particularly described as follows;

COMMENCING

LEGAL FROM SAWTOOTH

to the **POINT OF BEGINNING**.

The above described parcel contains 1.22 acres more or less.

XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXX

ACKNOWLEDGEMENT

STATE OF _____ }
COUNTY OF _____ } SS

ON THIS _____ DAY OF _____, 2016, BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR SAID STATE, PERSONALLY APPEARED BILL TRUAX, KNOWN OR IDENTIFIED TO ME TO BE THE MANAGER OF PARKWAY STATION, LIMITED LIABILITY COMPANY, THAT EXECUTED THE INSTRUMENT ON BEHALF OF SAID LIMITED LIABILITY COMPANY, AND ACKNOWLEDGED TO ME THAT SUCH LIMITED LIABILITY COMPANY EXECUTED THE SAME.

IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND AND SEAL THE DAY AND YEAR IN THIS CERTIFICATE FIRST ABOVE WRITTEN.

NOTARY PUBLIC FOR IDAHO

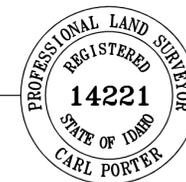
RESIDING AT _____.

MY COMMISSION EXPIRES _____.

CERTIFICATE OF SURVEYOR

I, CARL PORTER, DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, LICENSED BY THE STATE OF IDAHO, AND THAT THIS PLAT, AS DESCRIBED IN THE "CERTIFICATE OF OWNERS" AND THE ATTACHED PLAT, WAS DRAWN FROM AN ACTUAL SURVEY MADE ON THE GROUND UNDER MY DIRECT SUPERVISION AND ACCURATELY REPRESENTS THE POINTS PLATTED THEREON IN CONFORMITY WITH THE STATE OF IDAHO CODES RELATING TO PLATS, SURVEYS AND THE CORNER PERPETUATION AND FILING ACT, IDAHO CODE 55-1601 THROUGH 55-1612.

CARL PORTER



P.L.S. 14221

ROCK SOLID CIVIL
Civil Engineering and Land Development Consulting
270 North 27th Street, Boise, ID 83702
Office Phone: 208.342.3277
www.rocksolidcivil.com

SAWTOOTH
Land Surveying, LLC
EMMETT, IDAHO
2030 S. WASHINGTON AVE.
EMMETT, ID 83617
(208) 398-8104
FAX (208) 398-8105
WWW.SAWTOOTHLS.COM

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4 OF 5	05/14/2016	JDF	CP	16054	16054-FP

FINAL PLAT FOR
PARKWAY STATION

CENTRAL DISTRICT HEALTH DEPARTMENT

SANITARY RESTRICTIONS AS REQUIRED BY IDAHO CODE, TITLE 50, CHAPTER 13 HAVE BEEN SATISFIED. ACCORDING TO THE LETTER TO BE READ ON FILE WITH THE COUNTY RECORDER OR HIS AGENT LISTING THE CONDITIONS OF APPROVAL. SANITARY RESTRICTIONS MY BE RE-IMPOSED, IN ACCORDANCE WITH SECTION 50-1326, IDAHO CODE, BY THE ISSUANCE OF A CERTIFICATE OF DISAPPROVAL.

CENTRAL DISTRICT HEALTH DEPARTMENT, EHS DATE

APPROVAL OF ADA COUNTY HIGHWAY DISTRICT

THE FOREGOING PLAT WAS ACCEPTED AND APPROVED BY THE BOARD OF ADA COUNTY HIGHWAY DISTRICT COMMISSIONERS ON THE ____ DAY OF _____, _____.

PRESIDENT, ADA COUNTY HIGHWAY DISTRICT DATE

APPROVAL OF GARDEN CITY CITY ENGINEER

ACCEPTED AND APPROVED THIS ____ DAY OF _____, _____. BY THE CITY ENGINEER OF THE CITY OF GARDEN CITY, ADA COUNTY, IDAHO.

CITY ENGINEER DATE

APPROVAL OF GARDEN CITY CITY

I, _____, CITY CLERK IN AND FOR THE CITY OF GARDEN CITY, ADA COUNTY, IDAHO, DO HEREBY CERTIFY THAT AT A REGULAR MEETING OF THE CITY COUNCIL HELD ON THE ____ DAY OF _____, _____. THIS PLAT WAS DULY ACCEPTED AND APPROVED.

CITY CLERK DATE

APPROVAL OF COUNTY SURVEYOR

I, THE UNDERSIGNED COUNTY SURVEYOR IN AND FOR ADA COUNTY, IDAHO, DO HEREBY CERTIFY THAT I HAVE CHECKED THIS PLAT, AND FIND THAT IT COMPLIES WITH IDAHO CODE RELATING TO PLATS AND SURVEYS.

COUNTY SURVEYOR DATE
JERRY L. HASTINGS, PLS 5359

CERTIFICATE OF COUNTY TREASURER

I, THE UNDERSIGNED, COUNTY TREASURER IN AND FOR THE COUNTY OF ADA, STATE OF IDAHO, PER THE REQUIREMENTS I.C. 50.1308, DO HEREBY CERTIFY THAT ANY AND ALL CURRENT AND/OR DELINQUENT PROPERTY TAXES FOR THE PROPERTY INCLUDED IN THIS PROPOSED SUBDIVISION PLAT HAVE BEEN PAID IN FULL. THIS CERTIFICATION IS VALID FOR THE NEXT THIRTY (30) DAYS ONLY.

COUNTY TREASURER DATE

CERTIFICATE OF COUNTY RECORDER

STATE OF IDAHO }
COUNTY OF ADA } SS

I HEREBY CERTIFY THAT THIS INSTRUMENT WAS FILED AT THE REQUEST OF SAWTOOTH LAND SURVEYING, LLC. AT ____ MINUTES PAST ____ O'CLOCK ____ M. ON THIS ____ DAY OF _____, _____, IN BOOK _____ OF PLATS, AT PAGES _____ THROUGH _____, INSTRUMENT NO. _____.

DEPUTY EX-OFFICIO RECORDER



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5 OF 5	05/14/2016	JDF	CP	16054	16054-FP

DEVELOPMENT PLANS PARKWAY STATION

*A RESUBDIVISION OF LOTS 1-6, BLOCK 17 OF FAIRVIEW ACRES SUBDIVISION NO. 3
SITUATED IN THE SE 1/4 OF THE SW 1/4 OF SECTION 32
T.4N., R.2E., B.M., CITY OF GARDEN CITY, ADA COUNTY, IDAHO
2016*



VICINITY MAP
1" = 1000'

GENERAL

- COMPLIANCE WITH THE ENVIRONMENTAL PROTECTION AGENCY (EPA) REQUIREMENTS FOR PROTECTION FROM EROSION BY STORM WATER IS REQUIRED FOR THIS PROJECT. A RESPONSIBLE PARTY (RP) SHALL BE RESPONSIBLE TO COMPLY WITH THE EPA REQUIREMENTS. IF THE OWNER HAS NOT DESIGNATED A RP, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE A RP. THE RP IS REQUIRED TO PREPARE, FILE AND COMPLY WITH THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR THIS PROJECT. THE RP IS RESPONSIBLE TO FILE A NOTICE OF INTENT (NOI) TO CONSTRUCT WITH EPA. EPA MUST OFFICIALLY ACCEPT THE NOI PRIOR TO BEGINNING ANY SITE DISTURBANCE ACTIVITIES. THE SWPPP IS A DOCUMENT/PLAN THAT IS REQUIRED TO BE UPDATED AND AMENDED TO BEST FIT THE SITE AS CONSTRUCTION OCCURS. THE RP IS RESPONSIBLE TO KEEP THE PLAN CURRENT. AT COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND AFTER THE PROJECT SITE IS STABILIZED FOR EROSION CONTROL, THE RP IS REQUIRED TO PREPARE AND SUBMIT A NOTICE OF TERMINATION OF THE SWPPP WITH EPA.
- ALL CONSTRUCTION, MATERIALS, APPURTENANCES AND TESTING SHALL COMPLY WITH THE REQUIREMENTS OF THE 2015 EDITION OF THE IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ISPCW), UNLESS SPECIFICALLY MODIFIED BY THESE CONSTRUCTION DOCUMENTS.
- THE CONTRACTOR, ALL APPLICABLE SUB-CONTRACTORS, DEVELOPER/OWNER, UTILITY COMPANY REPRESENTATIVES, A GARDEN CITY DEPARTMENT OF PUBLIC WORKS REPRESENTATIVE AND AN ADA COUNTY HIGHWAY DISTRICT REPRESENTATIVE SHALL ATTEND A PRE-CONSTRUCTION CONFERENCE PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- THE CONTRACTOR SHALL OBTAIN A CONSTRUCTION PERMIT FROM THE ADA COUNTY HIGHWAY DISTRICT AT LEAST 24 HOURS PRIOR TO COMMENCING CONSTRUCTION OF ANY OF THE IMPROVEMENTS SHOWN HEREON LOCATED WITHIN PUBLIC RIGHT-OF-WAY.
- CONSTRUCTION INSPECTION SHALL BE PERFORMED BY THE PROJECT ENGINEER, THE ADA COUNTY HIGHWAY DISTRICT AND/OR THE GARDEN CITY DEPARTMENT OF PUBLIC WORKS. INSPECTION BY THE GARDEN CITY DEPARTMENT OF PUBLIC WORKS WILL BE FOR DEPARTMENT PURPOSES ONLY TO SPOT CHECK WORK COMPLIANCE WITH THE CITY'S REQUIREMENTS. IT IS THE PROJECT ENGINEER'S RESPONSIBILITY TO ASSURE COMPLIANCE WITH THE PROJECT PLANS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL VERIFY SITE CONDITIONS AND DIMENSIONS PRIOR TO BEGINNING WORK. ANY DEVIATIONS, OMISSIONS OR ERRORS SHALL BE PRESENTED TO THE PROJECT ENGINEER FOR RESOLUTION. ANY CHANGES TO THE PLANS AND SPECIFICATIONS SHALL BE SUBMITTED TO AND APPROVED BY THE GARDEN CITY DEPARTMENT OF PUBLIC WORKS PRIOR TO IMPLEMENTATION OF THE CHANGE. SAID CHANGE MAY ALSO NEED TO BE SUBMITTED TO THE IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY FOR APPROVAL.
- THE CONTRACTOR SHALL CONTACT DIGLINE (811) AND OTHER APPROPRIATE UTILITY PROVIDERS FOR UTILITY LOCATIONS AT LEAST 72 HOURS PRIOR TO BEGINNING ANY EXCAVATION.
- ANY WATERS CREATED BY DEWATERING SHALL NOT BE PERMITTED TO DIRECTLY DISCHARGE TO ANY EXISTING SURFACE WATER FACILITY. PRIOR TO DISCHARGING TO WATERS OF THE STATE OF IDAHO, THE CONTRACTOR SHALL SECURE A SHORT-TERM ACTIVITY EXEMPTION FROM THE APPLICABLE REGIONAL OFFICE OF THE IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY.
- HORIZONTAL AND VERTICAL SEPARATION OF POTABLE AND NON-POTABLE PIPELINES SHALL MEET THE REQUIREMENTS OF ISPCW SECTION 405 AND ISPCW DRAWING NO. 407.
- ALL LOT, BLOCK, STREET RIGHT-OF-WAY, AND EASEMENT DIMENSIONS SHALL BE TAKEN FROM THE PLAT OF PARKWAY STATION.
- THE CONTRACTOR SHALL REMOVE ALL OBSTRUCTIONS, BOTH ABOVE AND BELOW GROUND, AS REQUIRED FOR THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS. THIS SHALL INCLUDE CLEARING AND GRUBBING WHICH CONSISTS OF CLEARING THE GROUND SURFACE OF ALL TREES, STUMPS, BRUSH, UNDERGROWTH, HEDGES, HEAVY GROWTH OF GRASS OR WEEDS, FENCES, STRUCTURES, DEBRIS, RUBBISH, AND SUCH MATERIAL WHICH, IN THE OPINION OF THE ENGINEER, IS UNSUITABLE FOR THE FOUNDATION OF PAVEMENTS. ALL MATERIAL NOT SUITABLE FOR FUTURE USE ON SITE SHALL BE DISPOSED OF OFF SITE.
- SURVEY CONTROL POINTS WHICH ARE CRITICAL TO THE CONSTRUCTION OF THE PROJECT ARE LOCATED WITHIN THE LIMITS OF WORK. THE CONTRACTOR SHALL TAKE PRECAUTION TO PROTECT THE POINTS IN PLACE.
- THE CONTRACTOR SHALL MAINTAIN ALL EXISTING DRAINAGE FACILITIES WITHIN THE CONSTRUCTION AREA UNTIL THE DRAINAGE IMPROVEMENTS ARE IN PLACE AND FUNCTIONING.
- ALL CONTRACTORS WORKING WITHIN THE PROJECT BOUNDARIES ARE RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE SAFETY LAWS OF ANY JURISDICTIONAL BODY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL BARRICADES, SAFETY DEVICES AND CONTROL OF TRAFFIC WITHIN AND AROUND THE CONSTRUCTION AREA.
- ALL MATERIALS FURNISHED ON OR FOR THE PROJECT MUST MEET THE MINIMUM REQUIREMENTS OF THE APPROVING AGENCIES OR AS SET FORTH HEREIN, WHICHEVER IS MORE RESTRICTIVE.
- CONTRACTORS MUST FURNISH PROOF THAT ALL MATERIALS INSTALLED ON THIS PROJECT MEET THE REQUIREMENTS OF ITEM #16 AT THE REQUEST OF THE AGENCY AND/OR THE ENGINEER.
- THE CONTRACTOR IS TO FIELD VERIFY ALL EXISTING PAVEMENTS, CURB AND GUTTER, STORM DRAIN, CHANNEL CROSSINGS, AND SEWER ELEVATIONS OR INVERTS PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER WHEN ELEVATIONS OR INVERTS DO NOT MATCH PLANS.
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND SHALL IMMEDIATELY NOTIFY ENGINEER OF ANY CONFLICTS NOT SHOWN ON PLANS. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCURRED BY FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. CALL DIG LINE 1-800-842-5585.
- ALL UTILITIES INCLUDING SERVICE LINES WITHIN THE STREET TRAVEL WAY SHALL BE IN PLACE PRIOR TO CURB, GUTTER, SIDEWALKS AND STREET CONSTRUCTION.
- THE CONTRACTOR SHALL REPLACE ALL PAVEMENT AND CONCRETE REMOVED FOR THE INSTALLATION OF WATER, SEWER OR IRRIGATION PIPE. ALL PAVEMENT SHALL BE REPLACED WITHIN SEVEN CALENDAR DAYS FROM THE TIME THE PAVEMENT AND/OR CONCRETE IS REMOVED. CONCRETE AND PAVEMENT SHALL BE REPLACED PER ISPCW STANDARDS.
- NO PAVING SHALL OCCUR UNTIL THE CONTRACTOR OBTAINS WRITTEN APPROVAL OF ALL INSTALLED WATER AND SEWER FACILITIES FROM THE CITY OF GARDEN CITY.
- CONTRACTOR SHALL RETAIN ON SITE AT ALL TIMES A COPY OF THE GEOTECHNICAL REPORT BY MTL (81512996) DATED DECEMBER 2, 2015.

ROADWAY

- ALL CONSTRUCTION IN THE PUBLIC RIGHT-OF-WAY SHALL CONFORM TO THE CURRENT EDITION OF THE ISPCW AND THE ACHD SUPPLEMENTAL SPECIFICATIONS. NO EXCEPTIONS TO DISTRICT POLICY, STANDARDS, AND THE ISPCW WILL BE ALLOWED UNLESS SPECIFICALLY AND PREVIOUSLY APPROVED IN WRITING BY THE DISTRICT.
- WHEN DISCREPANCIES OCCUR BETWEEN PLANS AND SPECIFICATIONS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER. UNTIMELY NOTIFICATION SHALL NEGATE ANY CONTRACTORS CLAIM FOR ADDITIONAL COMPENSATION.
- ALL CONTRACTORS WORKING WITHIN THE PUBLIC ROAD RIGHT-OF-WAY ARE REQUIRED TO SECURE A RIGHT-OF-WAY PERMIT FROM ACHD AT LEAST 24 HOURS PRIOR TO ANY CONSTRUCTION.
- INSPECTION OF WORK WITHIN THE RIGHT-OF-WAYS SHALL BE BY THE ADA COUNTY HIGHWAY DISTRICT AND THE OWNER'S ENGINEER. CONTACT ACHD "ZONE" INSPECTION STAFF AT 387-6280.
- ALL STORM DRAINAGE APPURTENANCES SHALL BE INSPECTED BY ADA COUNTY HIGHWAY DISTRICT (RW ONLY), AND THE OWNER'S ENGINEER.
- ALL ON-SITE PRIVATE DRIVES SHALL CONFORM TO THE CURRENT EDITION OF THE ISPCW. NO EXCEPTIONS TO THE ISPCW WILL BE ALLOWED UNLESS SPECIFICALLY AND PREVIOUSLY APPROVED IN WRITING BY THE DESIGN ENGINEER AND/OR GARDEN CITY PUBLIC WORKS.
- CONTACT THE DESIGN ENGINEER FOR CONSTRUCTION OBSERVATION OF ALL ON-SITE PRIVATE DRIVES. THE CITY MAY STILL OBSERVE THE PRIVATE DRIVE CONSTRUCTION, BUT THE DESIGN ENGINEER IS PRIMARILY RESPONSIBLE FOR PLAN CONFORMANCE OF PRIVATE DRIVES.
- TESTING RESULTS OF ON-SITE PRIVATE DRIVES SHALL BE REVIEWED FOR COMPLIANCE BY THE OWNER'S ENGINEER.
- ALL COSTS OF RETESTING FOR PREVIOUSLY FAILED TESTS SHALL BE BACKCHARGED TO THE CONTRACTOR BY THE OWNER.
- ALL COSTS TO THE CONTRACTOR INCURRED IN CORRECTING DEFICIENT WORK SHALL BE TO THE CONTRACTOR'S ACCOUNT. FAILURE TO CORRECT SUCH WORK WILL BE CAUSE FOR A STOP WORK ORDER AND POSSIBLE TERMINATION.
- EXISTING A C PAVEMENT SHALL BE CUT TO A NEAT STRAIGHT LINE PARALLEL OR PERPENDICULAR TO THE STREET CENTERLINE AND THE EXPOSED EDGE SHALL BE TACKED WITH EMULSION PRIOR TO PAVING.
- MANHOLE GRADE RINGS, CAST IRON RINGS AND COVERS SHALL BE PROVIDED BY THE SEWER CONTRACTOR. THE ROAD CONTRACTOR SHALL INSTALL THE SEWER GRADE RINGS, CAST IRON RINGS, COVERS AND CONCRETE COLLARS TO FINISH GRADE. WATER VALVE BOXES AND COVERS SHALL BE PROVIDED BY THE WATER CONTRACTOR. THE ROAD CONTRACTOR SHALL INSTALL THE WATER VALVE BOXES COVERS AND CONCRETE COLLARS TO FINISH GRADE.
- ALL TOPS OF VALVE BOXES AND SEWER MANHOLES SHALL BE SET FLUSH WITH THE SLOPE OF THE FINISHED STREET GRADES. THE ROADWAY CONTRACTOR SHALL INSTALL AND ADJUST ALL SPACERS, GRADE RINGS, MANHOLE RINGS AND LIDS.
- ALL WATER VALVES WILL BE PLACED SO AS NOT TO CONFLICT WITH ANY CONCRETE CURB, GUTTER, VALLEY GUTTER, AND SIDEWALK IMPROVEMENTS.
- ALL WATER METERS ARE TO BE LOCATED OUTSIDE THE ROAD RIGHT-OF-WAY. THERE MUST BE AT LEAST A ONE (1) FOOT SEPARATION BETWEEN BACK OF SIDEWALK (OR CURB IF NO SIDEWALK) AND THE LEADING EDGE OF ANY FIRE HYDRANT.
- OVER EXCAVATION AND ADDITIONAL GRANULAR BACKFILL MAY BE REQUIRED IN HIGH GROUNDWATER AREAS WHICH ARE TO BE DETERMINED BY THE FIELD INSPECTOR.
- ALL MATERIALS PLACED WITHIN THE PUBLIC RIGHT-OF-WAY AS FILL OR BACKFILL SHALL BE PLACED AND COMPACTED IN ACCORDANCE WITH SECTION 306 OF THE CURRENT EDITION OF ADA COUNTY HIGHWAY DISTRICT STANDARD SPECIFICATIONS.
- CLEARING AND GRUBBING AND REMOVAL OF OBSTRUCTIONS SHALL BE IN ACCORDANCE WITH ISPCW SECTION 201.
- EXCAVATION AND EMBANKMENT SHALL BE IN ACCORDANCE WITH ISPCW SECTION 202.
- STRUCTURAL EXCAVATION AND COMPACTING BACKFILL SHALL BE IN ACCORDANCE WITH ISPCW SECTION 204.
- DEWATERING SHALL BE IN ACCORDANCE WITH ISPCW SECTION 205.
- PERMANENT EROSION CONTROL SHALL BE IN ACCORDANCE WITH ISPCW SECTION 206.
- PERMANENT STORMWATER BEST MANAGEMENT PRACTICES SHALL BE IN ACCORDANCE WITH ISPCW SECTION 207.
- UNCRUSHED AGGREGATE (6-INCH MINUS) SHALL BE PER ISPCW SECTION 801.
- CRUSHED AGGREGATE BASE 4-INCH (TYPE II) SHALL BE PER ISPCW SECTION 802.
- DRAINAGE GEOTEXTILE (TYPE I) SHALL BE PER ISPCW SECTION 2050.
- ROADWAY CONSTRUCTION WILL MEET SPECIFIC DETAILS AND REQUIREMENTS OF THE FOLLOWING IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION STANDARD DRAWINGS (CURRENT EDITION) OR THE APPLICABLE ACHD SUPPLEMENTAL DRAWINGS (CURRENT EDITION):
 - STREET SECTION, DRAWING NO. SD-801, AND SECTIONS AS SHOWN ON TYPICAL STREET SECTIONS.
 - CONCRETE VALLEY GUTTER, DRAWING NO. SD-708
 - VERTICAL CURB AND GUTTER, (ACHD SUP. DWG. SD-701)
 - PEDESTRIAN RAMP FOR HANDICAPPED, DRAWING NO. SD-712C.
 - SIDEWALKS, (ACHD SUP. DWG. SD-709)

THE ENGINEER OF RECORD CERTIFIES THAT THE PLANS ARE PREPARED IN SUBSTANTIAL CONFORMANCE WITH THE ACHD POLICY AND STANDARDS IN EFFECT AT THE TIME OF PREPARATION. THE ENGINEER ACKNOWLEDGES THAT ACHD ASSUMES NO LIABILITY FOR ERRORS OR DEFICIENCIES IN THE DESIGN. ALL VARIANCES FROM ACHD POLICY SHALL BE APPROVED IN WRITING.

SEWER

- ALL SEWER PIPE AND FITTINGS WITH COVER GREATER THAN 3 FEET, SHALL BE POLYVINYL CHLORIDE (PVC) CONFORMING TO THE REQUIREMENTS OF ASTM D-3034, SDR-35 FOR SIZES 4-INCH THROUGH 15-INCH; ASTM F-679, SDR-35, 1-1/2 WALL FOR SIZES 18-INCH THROUGH 24-INCH; AND ASTM F-679 FOR SIZES 18-INCH THROUGH 36-INCH. THE MINIMUM COVER FOR ALL PVC SEWER LINES SHALL BE 3 FEET. SEWER PIPE AND FITTINGS WITH COVER LESS THAN 3 FEET SHALL BE DUCTILE IRON (DI) CONFORMING TO ANSI A-21.51 OR AWWA C-151, MINIMUM CLASS 50.
- SANITARY SEWER MANHOLES SHALL BE CONSTRUCTED OF REINFORCED PRECAST CONCRETE PER THE ISPCW WITH A MAXIMUM OF 12 INCHES OF CONCRETE GRADE RINGS, A 24-INCH DIAMETER CAST IRON RING AND COVER AND A CONCRETE COLLAR PER ISPCW DRAWINGS SD-501, SD-505, SD-507, SD-508, SD-509. MANHOLES SHALL NOT HAVE STEPS. THE SEWER CONTRACTOR SHALL FIELD VERIFY THAT NO MORE THAN 12-INCHES OF GRADE RINGS ARE NECESSARY TO ADJUST THE MANHOLE TO FINAL GRADE. GRADE RINGS, RING AND COVERS SHALL BE PROVIDED BY THE SEWER CONTRACTOR. MANHOLE CONES SHALL BE ECCENTRIC FOR ALL MANHOLES 4 FEET AND DEEPER. THE VERTICAL WALL OF THE CONE SHALL BE PLACED UPSTREAM AND ROTATED 45°. CONCENTRIC CONES SHALL BE USED FOR MANHOLES LESS THAN 4 FEET DEEP.
- MANUFACTURED COMPRESSION BOOTS SHALL BE USED IN MANHOLES WHERE PIPELINES ENTER AND LEAVE THE MANHOLE.
- SEWER SERVICE LINES SHALL BE ISPCW TYPE "A" OR "B" AND CONSTRUCTED AND MARKED PER ISPCW DRAWING SD-511A. SERVICES SHALL NOT BE DEEPER THAN 5 FEET AT THE PROPERTY LINE, UNLESS SPECIFICALLY APPROVED BY THE CITY. SERVICES SHALL EXTEND HORIZONTALLY 10 FEET BEYOND THE PROPERTY LINE.
- SERVICE LINES SHALL INCLUDE AN INSPECTION CLEANOUT PLACED DIRECTLY ADJACENT TO AND INSIDE PUBLIC STREET RIGHT-OF-WAY OR THE SEWER EASEMENT LINE. THE CLEANOUT SHALL CONFORM TO SD-506A & SD-506B (BOLT DOWN COVER OPTION) WITH THE RISER BEING THE SAME SIZE AS THE SERVICE LINE.
- ALL SEWER MAINS AND SERVICES SHALL BE BEDDED PER THE REQUIREMENTS OF TYPE I BEDDING, EXCEPT THAT BEDDING MATERIAL SHALL BE SELECT 4-INCH MAXIMUM CRUSHED GRAVEL CHIPS. ALL BEDDING SHALL BE THOROUGHLY SHOVEL-SLICED UNDER THE PIPE.
- GROUNDWATER LEVELS SHALL BE MAINTAINED BELOW THE TRENCH BOTTOM AT ALL TIMES DURING CONSTRUCTION. GROUNDWATER SHALL NOT BE PERMITTED TO ENTER THE PIPELINE SYSTEM DURING CONSTRUCTION. AS SOON AS POSSIBLE THE CONTRACTOR SHALL INSTALL A REMOVABLE WATERTIGHT PLUG IN THE NEW PIPELINE AT THE POINT OF CONNECTION TO THE EXISTING SEWER SYSTEM.
- SEWERS SHALL BE CLEANED AND TESTED AFTER ALL UTILITIES ARE INSTALLED AND PRIOR TO PAVING. MATERIAL CLEANED FROM THE CONSTRUCTION SHALL NOT BE PERMITTED TO DISCHARGE TO THE DOWNSTREAM RECEIVING PIPELINE. ALL INSTALLED SEWER PIPES SHALL BE TESTED IN ACCORDANCE WITH DIVISION 500 OF THE ISPCW. A REPRESENTATIVE OF THE CITY MUST BE PRESENT MUST OBSERVE THE TESTING. MAINLINE PIPELINE TESTING SHALL INCLUDE AIR PRESSURE, DEFLECTION AND CLOSED CIRCUIT TELEVISION (CCTV) VISUAL INSPECTION. SERVICE LINE TESTING SHALL INCLUDE AIR PRESSURE AND CLOSED CIRCUIT TELEVISION (CCTV). THE CCTV REPORT SHALL BE IN THE FORM OF A VHS VIDEOTAPE OR DVD AND A WRITTEN LOG. MANHOLES SHALL BE VACUUM OR HYDROSTATICALLY TESTED FOR LEAKAGE. THE SEWER SYSTEM SHALL NOT ACCEPT ANY FLOWS UNTIL THE CITY ISSUES AN INITIAL ACCEPTANCE OF THE SYSTEM.
- THE CONTRACTOR SHALL GUARANTEE ALL WORK FOR A PERIOD OF AT LEAST A ONE-YEAR FOLLOWING THE CITY'S INITIAL ACCEPTANCE.
- THE HORIZONTAL SEPARATION OF THE WATER AND SEWER MAINS SHALL BE A MINIMUM OF TEN (10) FEET. WHERE IT IS NECESSARY FOR SEWER AND WATER TO CROSS EACH OTHER AND THE SEWER LINE IS LESS THAN 18 INCHES BELOW OR ABOVE THE WATER MAIN, THE SEWER LINE CROSSING SHALL BE P.V.C. PRESSURE PIPE CONFORMING TO AWWA C102241, FOR A DISTANCE OF 10' ON BOTH SIDES OF WATER LINE. ONE FULL LENGTH OF BOTH WATER MAIN AND SEWER LINE SHALL BE CENTERED OVER THE CROSSING POINT SO THAT ALL JOINTS WILL BE AS FAR FROM THE CROSSING AS POSSIBLE.
- FOR SEWER CONSTRUCTION ALL STATIONING RELATES TO THE SEWER CENTERLINE.
- PRIOR TO CONSTRUCTION, TEMPORARY BENCH MARKS (TBM'S) SHALL BE SET IN THE FIELD BY A LICENSED SURVEYOR OR ENGINEER AND SHALL BE FLAGGED AND CLEARLY VISIBLE FROM ALL DIRECTIONS. A TBM SHALL BE LOCATED WITHIN 100 FEET OF THE TIE-IN TO EXISTING SEWER AND SPACED NO GREATER THAN 500 FEET ALONG THE SEWER ALIGNMENT THEREAFTER. TBM'S SHALL HAVE ELEVATIONS TIED TO THE NAVD 1988 DATUM.

WATER

- ALL WATER MAINS SHALL BE POLYVINYL CHLORIDE (PVC) CONFORMING TO THE REQUIREMENTS OF AWWA C-900, CLASS 235, DR-18. ALL FITTINGS SHALL BE MECHANICAL JOINT OR FLANGED DUCTILE IRON CONFORMING TO THE REQUIREMENTS OF AWWA C-110. ALL PLASTIC PIPE SHALL BE INSTALLED WITH A #12 DIRECT BURIAL TRACER WIRE PLACED ALONG THE NORTH AND EAST SIDE OF THE MAIN. THE TRACER WIRE WILL NOT BE EXTENDED UP IN TO OR ALONG VALVE BOXES, BUT SHALL CONTINUE ALONG THE MAINLINE, UNINTERRUPTED. MINIMUM BURIAL DEPTHS FOR WATER MAINS SHALL BE 4 FEET FROM FINISH GRADE TO THE TOP OF THE PIPE.
- INDIVIDUAL WATER SERVICE CONNECTIONS SHALL BE POLYETHYLENE PIPE CONFORMING TO AWWA C-901, CLASS 200, DR-7.3. SERVICES SHALL BE CONSTRUCTED CONFORMING TO ISPCW DRAWING SD-401 OR SD-402, EXCEPT THAT THE LID SHALL CONTAIN A "TOUCH READ" HOLE. THE METER CAN SHALL BE 21-INCH DIAMETER AND NOTCHED AT BOTTOM FOR SERVICE LINES) AND THE CAN LID SHALL BE A D&L FOUNDRY 85020 FOR NON-TRAFFIC AREAS OR A D&L FOUNDRY 86018 FOR TRAFFIC AREAS. SERVICE PIPELINES SHALL BE A MINIMUM 1-INCH, UNLESS OTHERWISE NOTED, WITH MINIMUM 1-INCH WATER SETTERS.
- WATER VALVES SHALL BE RESILIENT-SEAT GATE VALVES CONFORMING TO AWWA C-509 OR AWWA C-515. ALL WATER VALVES SHALL BE INSTALLED WITH A STANDARD 5-1/4 INCH DIAMETER, TWO PIECE ADJUSTABLE CAST IRON VALVE BOX, TYLER/JUNON SERIES 6855, OR EQUAL. THE CAST IRON COVER SHALL BE MARKED WITH THE WORD "WATER" AS AN INTEGRAL PART OF THE COVER.
- FIRE HYDRANTS SHALL CONFORM TO AWWA C-502 AND ISPCW DRAWING SD-404. THE PUMPER NOZZLE OUTLET SHALL BE EQUIPPED WITH A "C" STORZ ADAPTER.
- ALL WATER MAINS AND SERVICES SHALL BE BEDDED PER THE REQUIREMENTS OF TYPE I BEDDING, EXCEPT THAT BEDDING MATERIAL SHALL BE SELECT 4-INCH MAXIMUM CRUSHED GRAVEL CHIPS FOR WATER MAINS AND 3/8-INCH MAXIMUM CRUSHED GRAVEL CHIPS FOR SERVICE LINES. ALL BEDDING SHALL BE THOROUGHLY SHOVEL-SLICED UNDER THE PIPE.
- ALL INSTALLED WATER LINES SHALL BE TESTED FOR LEAKAGE IN ACCORDANCE WITH SECTION 401.3.6 OF THE ISPCW FOLLOWING INSTALLATION OF ALL UTILITIES AND PRIOR TO PAVING. EACH METER SETTER SHALL BE OPENED TO BE SURE THAT THE SERVICE CORPORATION STOP IS OPEN AND THE SERVICE IS FUNCTIONAL PRIOR TO PAVING. A REPRESENTATIVE OF THE CITY MUST BE PRESENT MUST OBSERVE THE TESTING. ALL INSTALLED WATER LINES SHALL BE FLUSHED, DISINFECTED AND TESTED FOR BACTERIA IN ACCORDANCE WITH SECTION 401.3.9 OF THE ISPCW. THE WATER SYSTEM SHALL NOT BE OPENED TO THE CITY SYSTEM UNTIL THE CITY ISSUES AN INITIAL ACCEPTANCE OF THE SYSTEM.
- THE CONTRACTOR SHALL GUARANTEE ALL WORK FOR A PERIOD OF AT LEAST A ONE-YEAR FOLLOWING THE CITY'S INITIAL ACCEPTANCE.
- ANY IRRIGATION WATER BACKUP CONNECTED TO THE CITY POTABLE WATER SYSTEM MUST HAVE A REDUCED PRESSURE BACKFLOW ASSEMBLY. ALL INSTALLATIONS OF BACKFLOW ASSEMBLIES SHALL CONFORM WITH THE STANDARDS OF THE MOST RECENT EDITION OF THE PNWS-AWWA CROSS CONNECTION MANUAL. BACKFLOW ASSEMBLIES SHALL ALSO MEET THE REQUIREMENTS OF THE IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY. FINAL INSPECTION OF BACKFLOW DEVICES WILL BE CONDUCTED AFTER DEVICES HAVE BEEN TESTED BY A STATE CERTIFIED BACKFLOW TESTER, LICENSED TO DO BUSINESS IN GARDEN CITY.

DRAINAGE

- CONTACT THE DESIGN ENGINEER DURING EXCAVATION OF THE ON-SITE STORMWATER FACILITIES. DESIGN ENGINEER OR HIS REPRESENTATIVE MUST INSPECT EXCAVATION AND THE MATERIALS BEING USED FOR CONFORMANCE WITH THE APPROVED PLANS. THE CITY MAY STILL OBSERVE THE INSTALLATION, BUT THE DESIGN ENGINEER IS PRIMARILY RESPONSIBLE FOR PLAN CONFORMANCE OF THE ON-SITE DRAINAGE FACILITIES.
- ALL INSPECTIONS SHALL REQUIRE A 24-HOUR NOTICE PRIOR TO THE REQUESTED INSPECTION TIME. CALL THE INSPECTION HOT LINE AT 472-2920.
- PRIOR TO ANY EARTHWORK A 24-HOUR NOTICE TO BEGIN CONSTRUCTION IS REQUIRED. CALL INSPECTION HOT LINE AT 472-2920.
- DRAINAGE INSPECTIONS SHALL BE CONDUCTED AT ANY GIVEN TIME OR UPON REQUEST, DURING CONSTRUCTION, VERIFYING COMPLIANCE WITH THE CITY REQUIREMENTS AND CONSTRUCTION ACTIVITIES ARE FOLLOWED AS PER THE APPROVED PLANS.
- THE DRAINAGE SYSTEM AND ANY FILTER FABRIC SHALL NOT BE COVERED PRIOR TO INSPECTION. CALL THE INSPECTION HOT LINE AT 472-2920.
- THE SIZE AND LOCATION OF THE DRAINAGE SYSTEM SHALL CORRESPOND WITH THE APPROVED DRAINAGE SYSTEM PLAN AND SHALL BE INSPECTED.
- FINAL INSPECTION OF THE STORM DRAINAGE SYSTEM SHALL BE CONDUCTED FOLLOWING THE PAVING AND FINAL LANDSCAPING.
- ALL DRAINAGE CONVEYANCE ACCESS POINTS SHALL BE STENCILED OR MARKED WITH IDENTIFYING STATEMENT FOR THE PUBLIC "DO NOT DUMP - SYSTEM DRAINS TO GROUNDWATER" OR "RIVER", WHICHEVER IS RELEVANT TO THE SYSTEM DISPOSAL DESIGN.
- TRAFFIC RATED MANHOLE LIDS SHALL BE USED.
- ALL PARKING LOT GRADES SHALL BE AT LEAST 1.5% FOR ASPHALTIC-CONCRETE AND 0.4% FOR CONCRETE.

SHEET INDEX

- C1. COVER SHEET, INDEX & NOTES
- C2. HORIZONTAL CONTROL PLAN
- C3. ACHD FRONTAGE PLAN / PROFILE
- C4. ONSITE GRADING & DRAINAGE PLAN
- C5. DRAINAGE DETAILS
- C6. UTILITY PLAN
- C7. UTILITY PROFILES
- ESC1 (SWPPP)

LEGEND

---	SECTION LINE	IV	EXISTING IRRIGATION VALVE
---	CENTERLINE	IRR	EXISTING IRRIGATION BOX
---	RIGHT OF WAY LINE	OHP	EXISTING UNDERGROUND POWER LINE
---	EXISTING DEED OR LOT LINE	E	EXISTING OVERHEAD POWER LINE
---	PROPERTY BOUNDARY	EL	EXISTING ELECTRICAL BOX
---	EXISTING EASEMENT	SL	EXISTING STREET LIGHT
---	FOUND BRASS CAP MONUMENT	SL	EXISTING LIGHT POLE
---	FOUND ALUMINUM CAP MONUMENT	SL	EXISTING POLE ANCHOR
---	FOUND 5/8" REBAR	SL	EXISTING UTILITY POLE
---	FOUND 1/2" REBAR	SL	EXISTING UTILITY VAULT
---	FOUND SCRIBED "X"	SL	EXISTING POWER MANHOLE
---	FOUND PK NAIL/MAG NAIL	SL	EXISTING POWER TRANSFORMER
---	CONTROL POINT	SL	NEW LIGHT POLE
---	CALCULATION POINT, NOTHING FOUND, NOTHING SET	SL	EXISTING UNDERGROUND TELEPHONE LINE
---	TEMPORARY BENCH MARK	SL	EXISTING TELEPHONE RISER
---	LOT LINE	SL	EXISTING UNDERGROUND FIBER OPTIC LINE
---	NEW EASEMENT LINE	SL	EXISTING FIBER OPTIC RISER
---	SETBACK LINE	SL	EXISTING UNDERGROUND CABLE TELEVISION LINE
---	SET 5/8" REBAR/CAP	SL	EXISTING CABLE TELEVISION RISER
---	SET 1/2" REBAR/CAP	SL	EXISTING UNDERGROUND GAS LINE
---	RECORD INFORMATION	SL	EXISTING GAS VALVE
---	LOT NUMBER	SL	EXISTING GAS METER
---	BLOCK NUMBER	SL	EXISTING CHAIN LINK FENCE
---	EXISTING EDGE OF PAVEMENT	SL	EXISTING WOOD FENCE
---	EXISTING ROLLED CURB AND GUTTER	SL	EXISTING VINYL FENCE
---	EXISTING VERTICAL CURB AND GUTTER	SL	EXISTING METAL FENCE
---	EXISTING CURB, GUTTER AND SIDEWALK	SL	EXISTING FENCE GATE
---	EXISTING VALLEY GUTTER	SL	NEW WROUGHT IRON FENCE
---	SAW CUT LINE	SL	EXISTING 1' CONTOUR
---	NEW ROLLED CURB AND GUTTER	SL	EXISTING 5' CONTOUR
---	NEW VERTICAL CURB AND GUTTER	SL	SURFACE ELEVATION OF DESIGNATED FEATURE
---	NEW VERTICAL CURB NO GUTTER	SL	FEATURE DESIGNATION AS INDICATED BELOW
---	NEW VERTICAL CURB, GUTTER AND SIDEWALK	SL	EG
---	EXISTING CONCRETE FLATWORK	SL	SW
---	NEW CONCRETE FLATWORK	SL	SC
---	NEW PAVEDRAIN BLOCKS	SL	LIP
---	EXISTING SANITARY SEWER MAIN	SL	TVC
---	EXISTING SANITARY SEWER SERVICE	SL	TRC
---	EXISTING SANITARY SEWER MANHOLE	SL	TA
---	EXISTING SANITARY SEWER CLEANOUT	SL	TC
---	NEW 8" SANITARY SEWER MAIN	SL	1.45%
---	NEW SANITARY SEWER MANHOLE	SL	GB
---	NEW SANITARY SEWER SERVICE & CLEANOUT	SL	FF = 2651.82
---	EXISTING WATER LINE	SL	INV
---	EXISTING WATER SERVICE	SL	2+75.25 18' LT
---	EXISTING WATER VALVE	SL	PC
---	EXISTING WATER VALVE	SL	PRC
---	EXISTING FIRE HYDRANT	SL	PT
---	EXISTING WATER METER	SL	FOC
---	EXISTING WATER BIBB/FAUCET	SL	BOC
---	EXISTING FIRE DEPT. CONN. VALVE	SL	
---	NEW WATER LINE	SL	
---	NEW WATER SERVICE & METER	SL	
---	NEW WATER VALVE	SL	
---	NEW FIRE HYDRANT (PER I.S.P.W.C. DIV. 400)	SL	
---	NEW BLOW-OFF ASSEMBLY	SL	
---	EXISTING STORM DRAIN LINE	SL	
---	EXISTING STORM DRAIN MANHOLE	SL	
---	EXISTING STORM DRAIN DROP INLET	SL	
---	EXISTING STORM DRAIN CATCH BASIN	SL	
---	EXISTING DOWNSPOUT	SL	
---	NEW STORM DRAIN LINE	SL	
---	NEW STORM DRAIN CATCH BASIN	SL	
---	EXISTING MONITORING WELL	SL	
---	EXISTING DECIDUOUS TREE	SL	
---	EXISTING CONFERENOUS TREE	SL	
---	EXISTING SHRUB	SL	
---	EXISTING RETAINING WALL	SL	
---	EXISTING BUILDING	SL	
---	EXISTING AIR CONDITIONING UNIT	SL	
---	EXISTING BOLLARD	SL	
---	EXISTING MAILBOX	SL	
---	EXISTING MAIL KIOSK	SL	
---	EXISTING SIGN	SL	
---	NEW ELECTRICAL TRANSFORMER	SL	
---	NEW ELECTRICAL JUNCTION BOX	SL	

UTILITY REPRESENTATIVES

UTILITY	REPRESENTATIVES	PHONE
GAS	INTERMOUNTAIN GAS	(208) 377-6839
ELECTRICITY	IDAHO POWER	(208) 388-6320
TELEPHONE	CENTURY LINK	(208) 385-2144
SEWER	GARDEN CITY	(208) 472-2900
WATER	GARDEN CITY	(208) 472-2900
ROADS	ADA COUNTY HIGHWAY DISTRICT	(208) 454-8135
IRRIGATION	N/A	
FIRE	BOISE FIRE	(208) 570-6555

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(208) 447-9114

ARCHITECT
BOB SMITH
HUTCHISON SMITH ARCHITECTS
270 N. 27TH ST.
BOISE, ID 83702
(208) 338-1212

SURVEYOR
CARL PORTER, P.L.S.
SAWTOOTH LAND SURVEYING, LLC.
2030 S. WASHINGTON AVE.
EMMETT, ID 83617
(208) 398-8104

CIVIL ENGINEER
JIM E. COSLETT, P.E.
ROCK SOLID CIVIL LLC.
270 N. 27TH STREET
BOISE, ID 83702
(208) 342-3277

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PARKWAY STATION
E 42nd ST

GARDEN CITY, ID.

COVER, NOTES & VICINITY MAP

SHEET NO.
C1

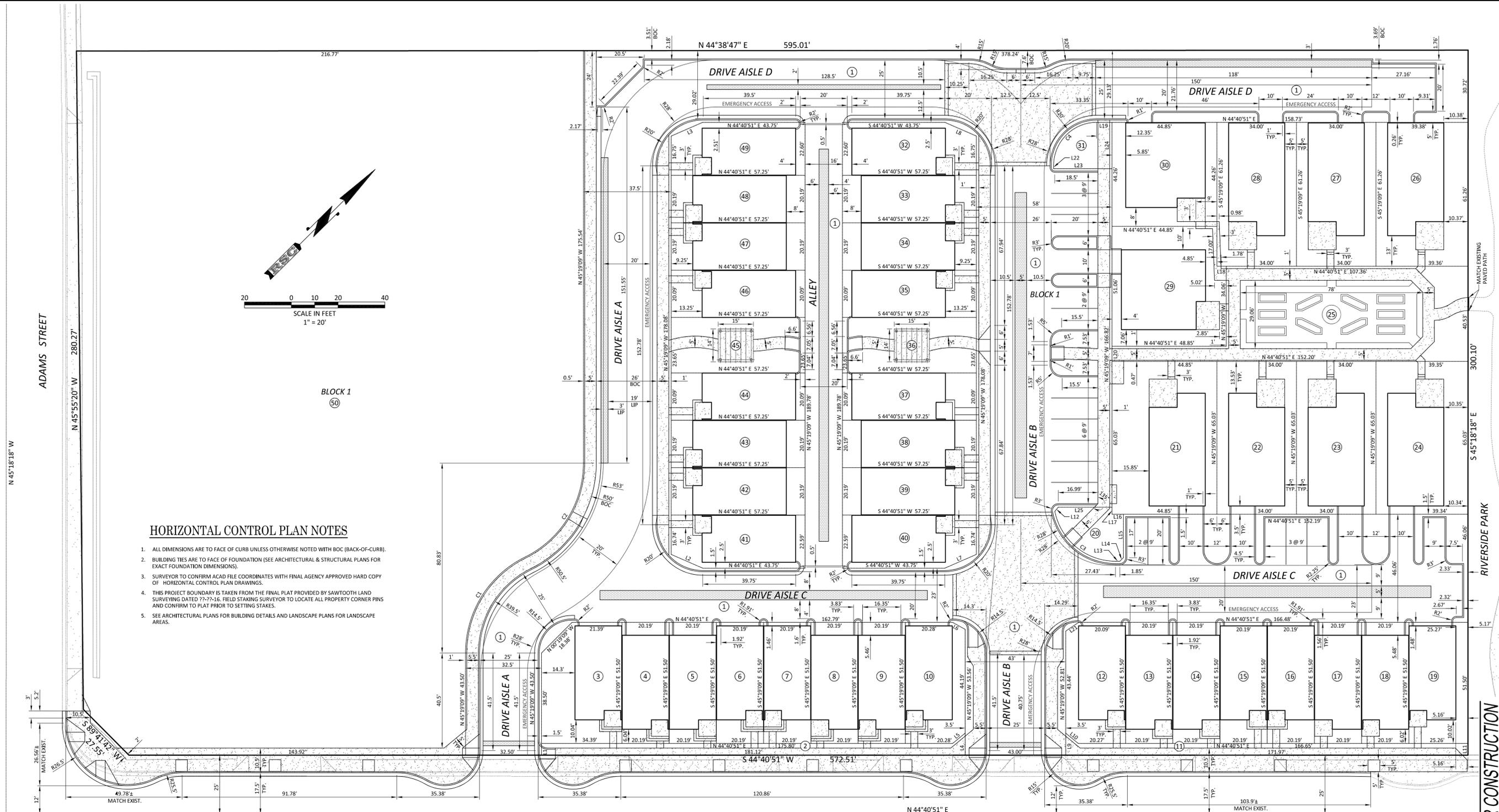
HUTCHISON SMITH ARCHITECTS
270 North 27th St. Boise, Idaho 83702
(208) 338-1212
fax (208) 338-0011

ROCK SOLID CIVIL
Civil Engineering and Land Development Consulting
270 North 27th Street, Boise, ID 83702
Office Phone: 208-342-3277
www.rocksolidcivil.com

PROJECT: RSC 16-14
FILE: Parkway CV16.rwg
DATE: June 1, 2016
DRAWN: JDF
REVISIONS:

Stamp

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HORIZONTAL CONTROL PLAN NOTES

1. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED WITH BOC (BACK-OF-CURB).
2. BUILDING TIES ARE TO FACE OF FOUNDATION (SEE ARCHITECTURAL & STRUCTURAL PLANS FOR EXACT FOUNDATION DIMENSIONS).
3. SURVEYOR TO CONFIRM ACAD FILE COORDINATES WITH FINAL AGENCY APPROVED HARD COPY OF HORIZONTAL CONTROL PLAN DRAWINGS.
4. THIS PROJECT BOUNDARY IS TAKEN FROM THE FINAL PLAT PROVIDED BY SAWTOOTH LAND SURVEYING DATED 7-7-16. FIELD STAKING SURVEYOR TO LOCATE ALL PROPERTY CORNER PINS AND CONFIRM TO PLAT PRIOR TO SETTING STAKES.
5. SEE ARCHITECTURAL PLANS FOR BUILDING DETAILS AND LANDSCAPE PLANS FOR LANDSCAPE AREAS.

CURVE TABLE

CURVE	ARC LENGTH	DELTA ANGLE	RADIUS	CHORD BEARING	CHORD LENGTH
C1	30.75'	63°54'36"	45.50'	N 13°21'51" W	48.16'
C2	49.64'	63°54'36"	44.50'	N 13°21'51" W	47.10'
C3	36.29'	78°27'27"	26.50'	N 83°54'35" E	33.52'
C4	29.06'	90°00'00"	18.50'	N 00°19'09" W	26.16'

LINE TABLE

LINE	BEARING	DISTANCE	LINE	BEARING	DISTANCE
L1	N 45°19'09" W	5.00'	L14	N 40°19'09" W	2.12'
L2	N 68°06'46" E	14.71'	L15	N 45°19'09" W	18.50'
L3	N 21°14'56" E	4.85'	L16	N 44°40'51" E	4.85'
L4	N 45°19'09" W	9.37'	L17	N 45°19'09" W	3.00'
L5	N 05°18'31" E	6.89'	L18	N 44°40'51" E	4.90'
L6	N 73°33'53" E	6.08'	L19	N 44°40'51" E	6.50'
L7	N 21°14'56" E	14.71'	L20	N 45°19'09" W	6.47'
L8	N 68°06'46" E	14.71'	L21	N 10°40'00" E	6.62'
L9	N 45°19'09" W	9.37'	L22	N 45°19'09" W	1.26'
L10	N 84°05'11" E	6.89'	L23	N 44°40'51" E	24.96'
L11	N 45°19'09" W	5.00'	L24	N 45°19'09" W	19.76'
L12	N 06°05'25" W	2.32'	L25	N 44°40'51" E	22.99'
L13	N 44°40'51" E	1.85'			

HUTCHISON SMITH ARCHITECTS
 270 North 27th St. Boise, Idaho 83702
 (208) 338-1212 Fax (208) 338-0011

PROJECT: RSC 16-14
 FILE: Parkway HCDwg
 DATE: June 1, 2016
 DRAWN: JDF
 REVISIONS:

ROCK SOLID CIVIL
 Civil Engineering and Land Development Consulting
 270 North 27th Street, Boise, ID 83702
 Office Phone: 208-342-3277
 www.rocksolidcivil.com

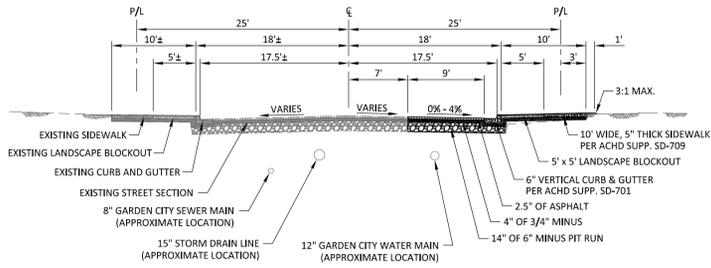


MIXED USE RESIDENTIAL PARKWAY STATION
 E 42nd St
HORIZONTAL CONTROL PLAN

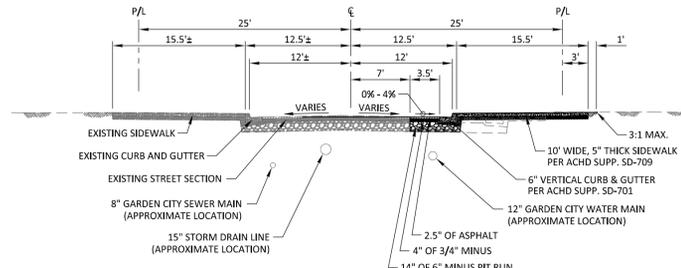
GARDEN CITY, ID.
 SHEET NO. **C2**

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SECTION A-A
EAST 42nd STREET
-NTS-



SECTION B-B
EAST 42nd STREET
-NTS-

KEYNOTES

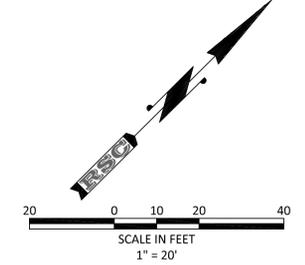
- 1 SAW CUT MIN. 3" INTO EXISTING PAVEMENT (REPAIR PER ACHD SUPP. SD-303 & SD-806) (SEE PAVEMENT REPAIR NOTES, THIS SHEET)
- 2 COORDINATE TO REMOVE EXISTING CURB, GUTTER AND SIDEWALK (TYP.)
- 3 MATCH EXISTING CURB, GUTTER & SIDEWALK
- 4 CONSTRUCT CONCRETE TRANSITION FROM 10' WIDE SIDEWALK TO EXISTING SIDEWALK
- 5 CONSTRUCT 6" VERTICAL CURB & GUTTER (PER ACHD SUPP. SD-701)
- 6 CONSTRUCT 10' WIDE CONCRETE SIDEWALK. (PER ACHD SUPP. SD-709)
- 7 CONSTRUCT PEDESTRIAN RAMP (PER I.S.P.W.C. SD-712A) w/TRUNCATED DOMES RIGID INSERTS WET-SET INTO CONCRETE COLORED TRAFFIC YELLOW (PER SD-712). (CONCRETE STAMP & ADHESIVE MATS NOT ALLOWED). CONTRACTOR TO VERIFY CROSS SLOPE, NOT TO EXCEED 1.75% ±0.25% (NO TOLERANCES ALLOWED)
- 8 5' x 5' LANDSCAPE BLOCKOUT IN SIDEWALK (TYP.)
- 9 INSTALL TYPE I INLET CATCH BASIN (PER ACHD SUPP. SD-601)
- 10 INSTALL 12" LF OF 12" C-909 PVC STORM DRAIN PIPE @ 0.5%
- 11 INSTALL 188 LF OF 12" C-909 PVC STORM DRAIN PIPE @ 0.5%
- 12 CONSTRUCT PEDESTRIAN RAMP (PER I.S.P.W.C. SD-712C) w/TRUNCATED DOMES RIGID INSERTS WET-SET INTO CONCRETE COLORED TRAFFIC YELLOW (PER SD-712). (CONCRETE STAMP & ADHESIVE MATS NOT ALLOWED). CONTRACTOR TO VERIFY CROSS SLOPE, NOT TO EXCEED 1.75% ±0.25% (NO TOLERANCES ALLOWED)
- 13 APPROXIMATE LOCATION OF NEW LIGHT POLE (SEE ELECTRICAL PLANS)
- 14 RETAIN AND PROTECT EXISTING CURB, GUTTER AND SIDEWALK
- 15 REMOVE EXISTING SIDEWALK
- 16 MATCH EXISTING SIDEWALK
- 17 COORDINATE TO RELOCATE AND/OR ADJUST CROSSWALK SIGN AND VAULT TO GRADE
- 18 COORDINATE TO RELOCATE TRAFFIC SIGN
- 19 COORDINATE TO RELOCATE UTILITY POLE
- 20 COORDINATE TO REMOVE OR PROTECT WATER METER
- 21 RETAIN AND PROTECT EXISTING CATCH BASIN. ADJUST FRAME & GRATE TO FINISHED GRADE
- 22 COORDINATE TO REMOVE EXISTING UTILITY
- 23 COORDINATE TO REMOVE TREE
- 24 COORDINATE TO RELOCATE FIRE HYDRANT TO BACK OF SIDEWALK
- 25 COORDINATE TO CAP SEWER STUB
- 26 COORDINATE TO REMOVE MAIL KIOSK
- 27 NEW 1" WATER SERVICE CROSSING (SEE SHEET C6). SLEEVE CROSSINGS UNDER NEW STORM DRAIN LINE PER KEYNOTE 17 ON SHEET C6.

ACHD PAVEMENT REPAIR NOTES

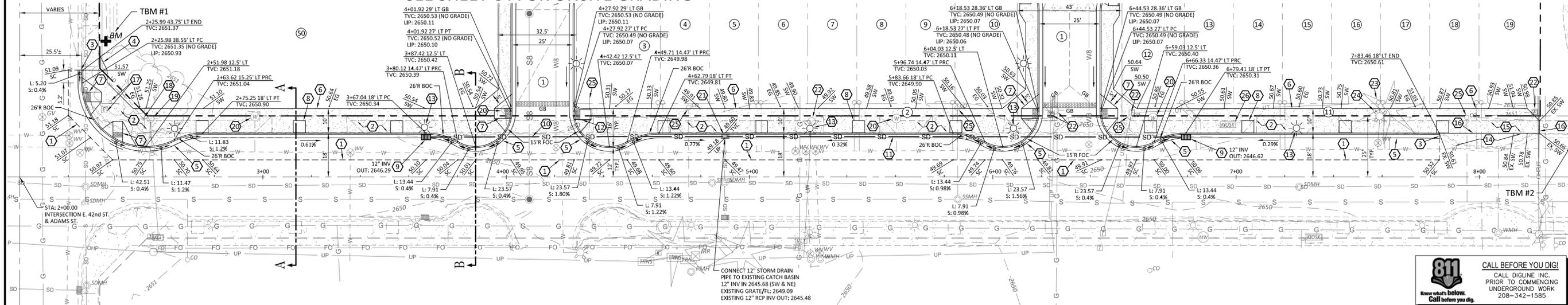
- ACTUAL FIELD CONDITIONS DURING TRENCHING MAY REQUIRE ADDITIONAL PAVEMENT REPAIR BEYOND THE LIMITS SHOWN ON THE PLANS. THE FOLLOWING CONDITIONS ARE LISTED IN SECTION 6000 OF ACHD POLICY MANUAL. ALSO REFERENCE I.S.P.W.C. SD-301; ACHD SUPP. DWG SD-303; & ACHD SUPP. DWG SD-806.
1. ALL ASPHALT MATCH LINES FOR PAVEMENT REPAIR SHALL BE PARALLEL TO THE CENTERLINE OF THE STREET AND INCLUDE ANY AREA DAMAGED BY EQUIPMENT DURING TRENCHING OPERATIONS.
 2. IF THE CUMULATIVE DAMAGED PAVEMENT AREA EXCEEDS 50% OF THE TOTAL ROAD SURFACE, CONTRACTOR SHALL REPLACE THE ENTIRE ROADWAY SURFACE.
 3. CONTRACTOR SHALL REPLACE THE PAVEMENT SURFACE TO ENSURE MATCH LINE DOES NOT FALL WITHIN THE WHEEL PATH OF A LANE. MATCH LINE SHALL ONLY FALL IN THE CENTER OR EDGE OF A TRAVEL LANE.
 4. FLOWABLE FILL OR IMPORTED MATERIAL MAY BE REQUIRED IF THE NATIVE TRENCH MATERIAL IS DEEMED UNSUITABLE BY ACHD INSPECTOR, DOES NOT MEET COMPACTION STANDARDS OR TIME IS A CRITICAL FACTOR.
 5. ANY EXCEPTIONS TO THESE RULES SHALL BE PRE-APPROVED IN WRITING BY THE DISTRICT STAFF BEFORE CONSTRUCTION BEGINS.
 6. MATCH EXIST. STREET/DRIVEWAY SECTION OR USE THE FOLLOWING: 2.5" OF ASPHALT OVER 4" OF 3/4" MINUS CRUSHED AGGREGATE OVER 14" OF 6" MINUS PIT RUN, WHICHEVER SECTION IS GREATER MUST BE USED.

BENCH MARKS DATUM NAVD 88

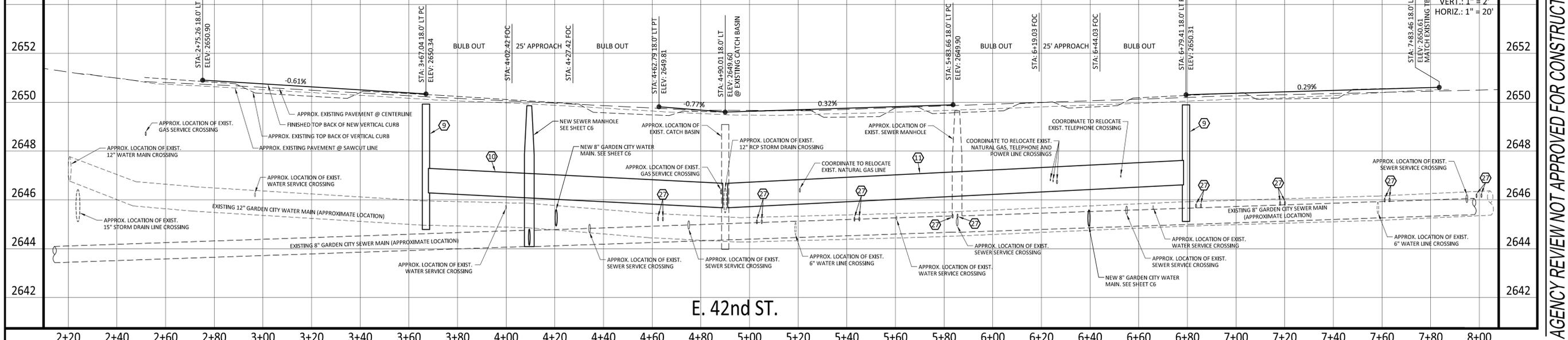
TBM #1	ELEV. 2651.25	SCRIBED "X" IN PAVEMENT BEHIND THE SIDEWALK IN THE NORTHWEST QUADRANT OF THE INTERSECTION OF E. 42nd STREET AND ADAMS STREET
TBM #2	ELEV. 2650.67	SCRIBED "X" IN SIDEWALK APPROXIMATELY 16 FEET NORTHEASTERLY FROM THE NORTHEASTERLY PROPERTY CORNER



SEE SHEET C4 FOR ONSITE GRADING



SEE SHEET C6 FOR UTILITY PLAN



HUTCHISON SMITH ARCHITECTS
270 North 27th St. Boise, Idaho 83702
(208) 338-1212 fax (208) 338-0011

PROJECT: RSC 16-14
FILE: Parkway HCDwg
DATE: June 1, 2016
DRAWN: JDF
REVISIONS:

ROCK SOLID CIVIL
Civil Engineering and Land Development Consulting
270 North 27th Street, Boise, ID 83702
Office Phone: 208-342-3277
www.rocksolidcivil.com

Stamp: PROFESSIONAL ENGINEER REGISTERED No. 10692 STATE OF IDAHO JIM E. COSLETT

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MIXED USE RESIDENTIAL PARKWAY STATION E 42nd ST

ACHD FRONTAGE PLAN/PROFILE

GARDEN CITY, ID.

SHEET NO. **C3**

KEYNOTES

1. CONSTRUCT 6" VERTICAL CURB & GUTTER w/REVERSE GUTTER PLATE (SEE GRADING NOTES)
2. CONSTRUCT PEDESTRIAN RAMP (PER I.S.P.W.C. SD-712G) w/TRUNCATED DOMES RIGID INSERTS WET-SET INTO CONCRETE COLORED TRAFFIC YELLOW (PER SD-712). (CONCRETE STAMP & ADHESIVE MATS NOT ALLOWED). CONTRACTOR TO VERIFY CROSS SLOPE, NOT TO EXCEED 1.75% ±0.25% (NO TOLERANCES ALLOWED)
3. CONSTRUCT PEDESTRIAN RAMP (PER I.S.P.W.C. SD-712C) w/TRUNCATED DOMES RIGID INSERTS WET-SET INTO CONCRETE COLORED TRAFFIC YELLOW (PER SD-712). (CONCRETE STAMP & ADHESIVE MATS NOT ALLOWED). CONTRACTOR TO VERIFY CROSS SLOPE, NOT TO EXCEED 1.75% ±0.25% (NO TOLERANCES ALLOWED)
4. CONSTRUCT CONCRETE SIDEWALK (TYP). (PER ACHD SUPP. SD-709)
5. 4" TRANSITION FROM 6" VERTICAL CURB TO 3" ROLLED CURB
6. CONSTRUCT 3" ROLLED CURB & GUTTER w/REVERSE GUTTER PLATE (SEE GRADING NOTES)
7. INSTALL "PAVEDRAIN" BLOCKS PER PAVEDRAIN SECTION ON SHEET C5
8. CONSTRUCT 6" VERTICAL CURB, NO GUTTER (TYP). (PER I.S.P.W.C. SD-701A)
9. CONSTRUCT ONSITE SIDEWALK PER DETAIL ON SHEET C5
10. CONSTRUCT THICKENED EDGE SIDEWALK PER DETAIL ON SHEET C5, OR CONTRACTOR MAY POUR SIDEWALK AGAINST I.S.P.W.C. SD-701A VERTICAL CURB AT OWNER'S DISCRETION
11. CONSTRUCT PEDESTRIAN RAMP PER DETAIL ON SHEET C5
12. CONSTRUCT 6" VERTICAL CURB & GUTTER (PER ACHD SUPP. SD-701)
13. 4" TRANSITION FROM REVERSE GUTTER PLATE TO STANDARD GUTTER PLATE
14. TRUCK ACCESS PAVEMENT SECTION (SEE STRUCTURAL SECTION - DRIVEWAY DETAIL ON SHEET C5)
15. PARKING PAVEMENT SECTION (SEE STRUCTURAL SECTION - PARKING DETAIL ON SHEET C5)
16. TRANSITION FROM STRUCTURAL SECTION - DRIVEWAY TO STRUCTURAL SECTION - PARKING
17. CONTRACTOR TO COORDINATE WITH OWNERS TO INSTALL NEW WROUGHT IRON FENCE
18. STAINED/STAMPED CONCRETE. COLOR AND PATTERN AS SELECTED

GRADING NOTES

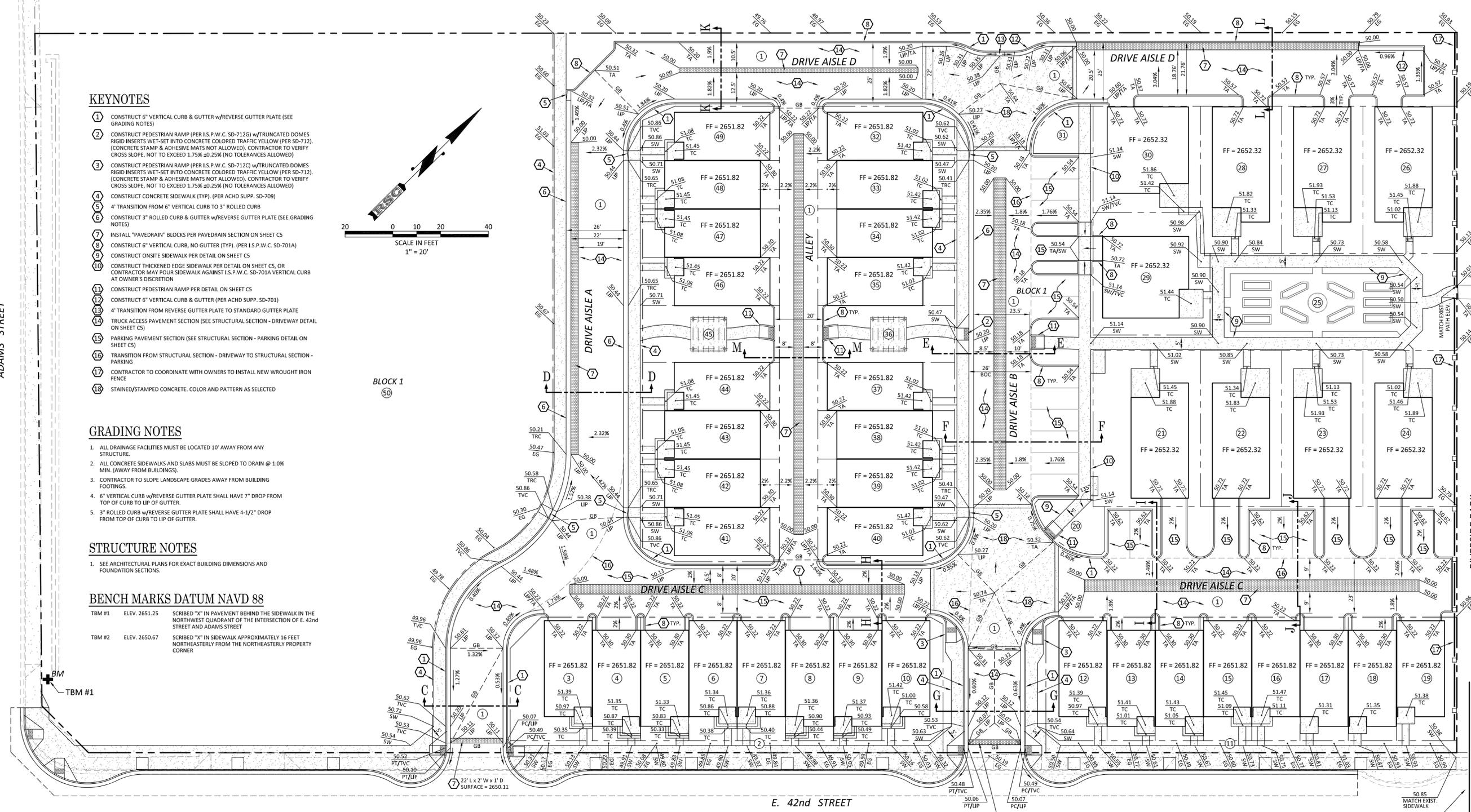
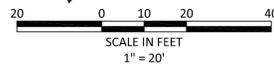
1. ALL DRAINAGE FACILITIES MUST BE LOCATED 10' AWAY FROM ANY STRUCTURE.
2. ALL CONCRETE SIDEWALKS AND SLABS MUST BE SLOPED TO DRAIN @ 1.0% MIN. AWAY FROM BUILDINGS.
3. CONTRACTOR TO SLOPE LANDSCAPE GRADES AWAY FROM BUILDING FOOTINGS.
4. 6" VERTICAL CURB w/REVERSE GUTTER PLATE SHALL HAVE 7" DROP FROM TOP OF CURB TO LIP OF GUTTER.
5. 3" ROLLED CURB w/REVERSE GUTTER PLATE SHALL HAVE 4-1/2" DROP FROM TOP OF CURB TO LIP OF GUTTER.

STRUCTURE NOTES

1. SEE ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSIONS AND FOUNDATION SECTIONS.

BENCH MARKS DATUM NAVD 88

- TBM #1 ELEV. 2651.25 SCRIBED "X" IN PAVEMENT BEHIND THE SIDEWALK IN THE NORTHWEST QUADRANT OF THE INTERSECTION OF E. 42nd STREET AND ADAMS STREET
- TBM #2 ELEV. 2650.67 SCRIBED "X" IN SIDEWALK APPROXIMATELY 16 FEET NORTHEASTERLY FROM THE NORTHEASTERLY PROPERTY CORNER



SEE SHEET C3 FOR GRADING ON E. 42nd STREET

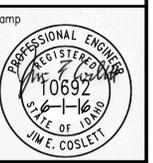
AGENCY REVIEW NOT APPROVED FOR CONSTRUCTION

HUTCHISON SMITH ARCHITECTS



PROJECT: RSC 16-14
 FILE: Parkway GD.dwg
 DATE: June 1, 2016
 DRAWN: JDF
 REVISIONS:

ROCK SOLID CIVIL
 Civil Engineering and Land Development Consulting
 270 North 27th Street, Boise, ID 83702
 Office Phone: 208.342.3277
 www.rocksolidcivil.com

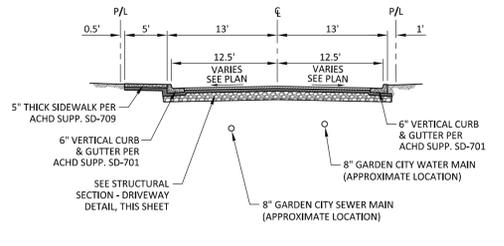


MIXED USE RESIDENTIAL
 PARKWAY STATION
 E 42nd ST
 GRADING & DRAINAGE PLAN

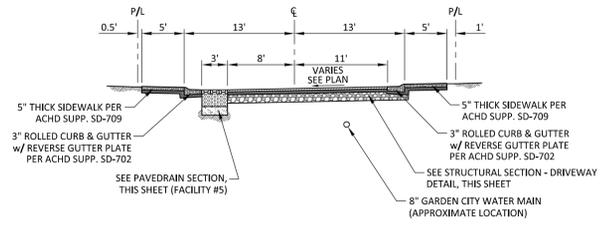
GARDEN CITY, ID.
 SHEET NO.
C4

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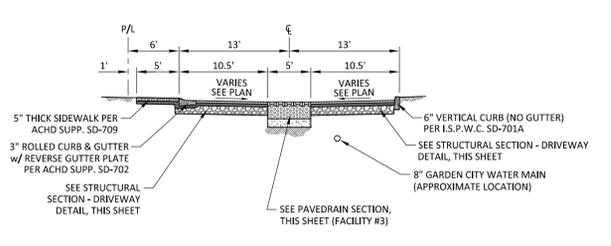
AGENCY REVIEW NOT APPROVED FOR CONSTRUCTION



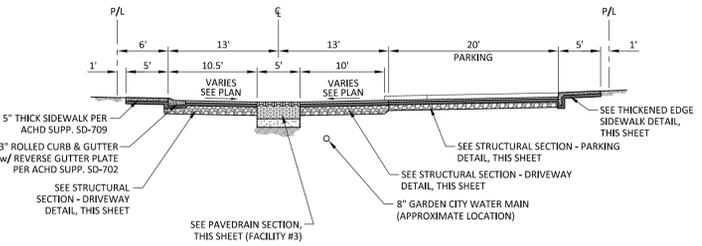
SECTION C - C
DRIVE AISLE A
 1" = 10'



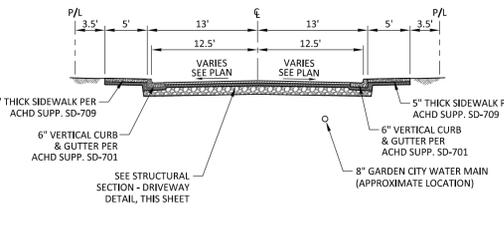
SECTION D - D
DRIVE AISLE A
 1" = 10'



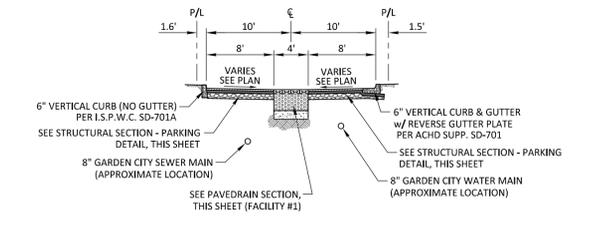
SECTION E - E
DRIVE AISLE B
 1" = 10'



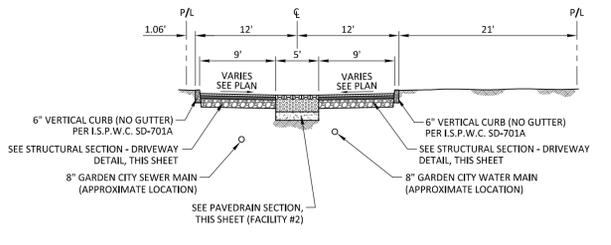
SECTION F - F
DRIVE AISLE B
 1" = 10'



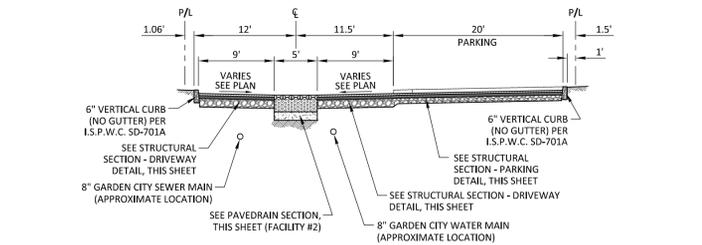
SECTION G - G
DRIVE AISLE B
 1" = 10'



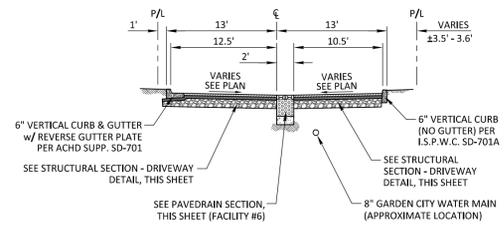
SECTION H - H
DRIVE AISLE C
 1" = 10'



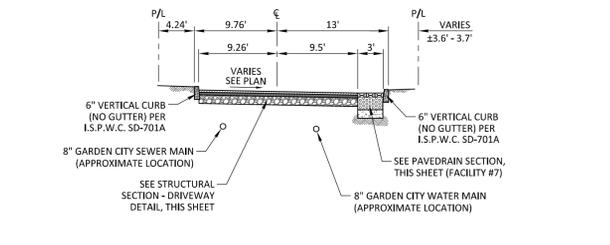
SECTION I - I
DRIVE AISLE C
 1" = 10'



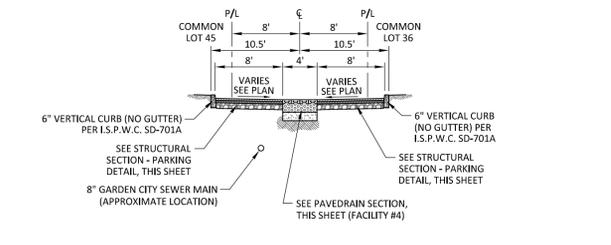
SECTION J - J
DRIVE AISLE C
 1" = 10'



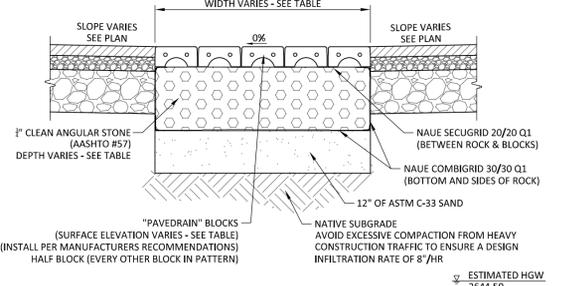
SECTION K - K
DRIVE AISLE D
 1" = 10'



SECTION L - L
DRIVE AISLE D
 1" = 10'



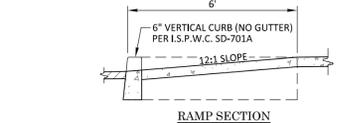
SECTION M - M
ALLEY
 1" = 10'



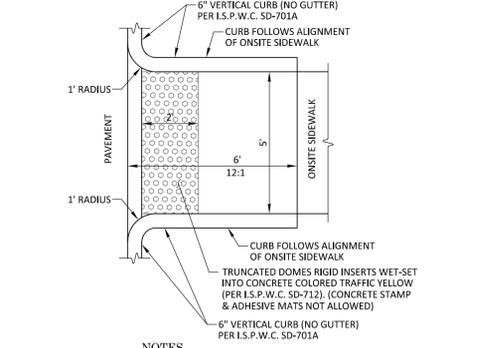
DRAINAGE FACILITY TABLE

DRAINAGE FACILITY #	LENGTH (FT.)	WIDTH (FT.)	ROCK DEPTH (FT.)	TOP PAVEDRAIN ELEVATION	ESTIMATED HIGH GROUNDWATER
1	140	4	2	2650.00	2644.50
2	140	5	1.5	2650.00	2644.50
3	130	5	1.5	2650.00	2644.50
4	167	4	1	2650.00	2644.50
5	130	3	1.5	2650.00	2644.50
6	100	2	2	2650.00	2644.50
7	118	3	1.5	2650.00	2644.50

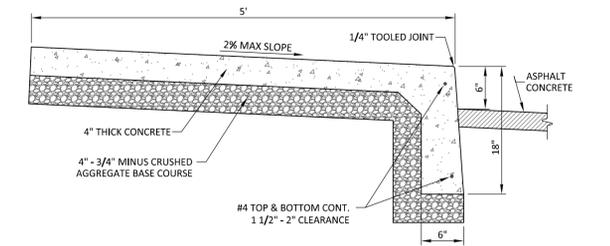
PAVEDRAIN SECTION
 -NTS-



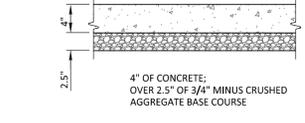
RAMP SECTION



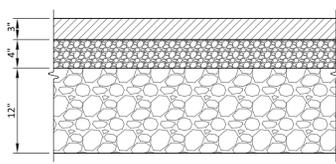
PEDESTRIAN RAMP DETAIL
 -NTS-



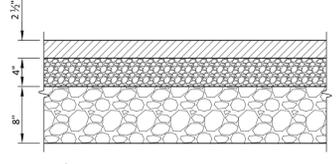
THICKENED EDGE SIDEWALK DETAIL
 -NTS-



ONSITE SIDEWALK / PATIO SECTION
 (UNLESS OTHERWISE SPECIFIED)
 -NTS-



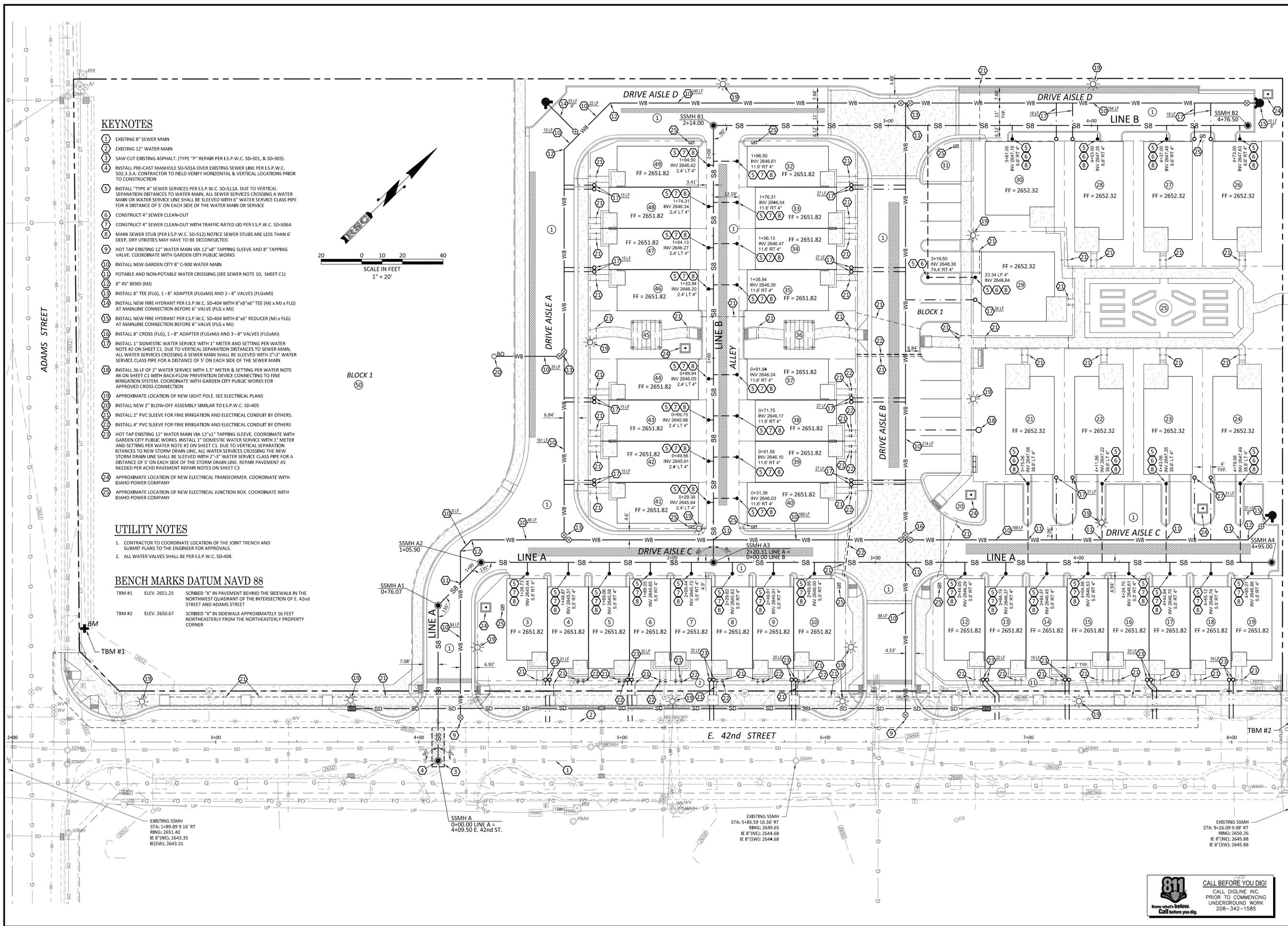
STRUCTURAL SECTION - DRIVEWAY
 (TRUCK ACCESS)
 -NTS-



STRUCTURAL SECTION - PARKING
 (NO TRUCK ACCESS)
 -NTS-

- NOTES**
1. SIDEWALKS PER I.S.P.W.C. SD-709.
 2. SEE BUILDING PLANS FOR GARAGE SLAB THICKNESS.
 3. ALL SIDEWALKS SHALL SLOPE TO DRAIN (AWAY FROM STRUCTURES) @ 1.0% MIN.
 4. CREATE TOOLED OR SAWCUT JOINTS FOR CRACK RELIEF AT 4'-6" SPACING (TYPICAL).

- NOTES**
1. PAVEMENT THICKNESS RECOMMENDATION IS ADOPTED FROM THE GEOTECHNICAL ENGINEERING REPORT OF THE TRAILWINDS DEVELOPMENT, MTI FILE NUMBER B1400866, STAMPED DATE JANUARY 31, 2014.



KEYNOTES

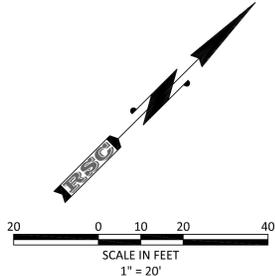
- 1 EXISTING 8" SEWER MAIN
- 2 EXISTING 12" WATER MAIN
- 3 SAW CUT EXISTING ASPHALT. (TYPE "P" REPAIR PER I.S.P.W.C. SD-301, & SD-303)
- 4 INSTALL PRE-CAST MANHOLE SD-501A OVER EXISTING SEWER LINE PER I.S.P.W.C. 502.3.3.A. CONTRACTOR TO FIELD VERIFY HORIZONTAL & VERTICAL LOCATIONS PRIOR TO CONSTRUCTION
- 5 INSTALL "TYPE A" SEWER SERVICES PER I.S.P.W.C. SD-511A. DUE TO VERTICAL SEPARATION DISTANCES TO WATER MAIN, ALL SEWER SERVICES CROSSING A WATER MAIN OR WATER SERVICE LINE SHALL BE SLEEVED WITH 6" WATER SERVICE CLASS PIPE FOR A DISTANCE OF 5' ON EACH SIDE OF THE WATER MAIN OR SERVICE
- 6 CONSTRUCT 4" SEWER CLEAN-OUT
- 7 CONSTRUCT 4" SEWER CLEAN-OUT WITH TRAFFIC RATED LID PER I.S.P.W.C. SD-506A
- 8 MARK SEWER STUB (PER I.S.P.W.C. SD-512) NOTICE SEWER STUBS ARE LESS THAN 6" DEEP, DRY UTILITIES MAY HAVE TO BE DECONFLICTED.
- 9 HOT TAP EXISTING 12" WATER MAIN VIA 12"x8" TAPPING SLEEVE AND 8" TAPPING VALVE. COORDINATE WITH GARDEN CITY PUBLIC WORKS
- 10 INSTALL NEW GARDEN CITY 8" C-900 WATER MAIN
- 11 POTABLE AND NON-POTABLE WATER CROSSING (SEE SEWER NOTE 10, SHEET C1)
- 12 8" 45° BEND (M)
- 13 INSTALL 8" TEE (FLG), 1-8" ADAPTER (FLGxM) AND 2-8" VALVES (FLGxM)
- 14 INSTALL NEW FIRE HYDRANT PER I.S.P.W.C. SD-404 WITH 8"x8"x6" TEE (M x M) x FLG AT MAINLINE CONNECTION BEFORE 6" VALVE (FLG x M)
- 15 INSTALL NEW FIRE HYDRANT PER I.S.P.W.C. SD-404 WITH 8"x6" REDUCER (M) x FLG AT MAINLINE CONNECTION BEFORE 6" VALVE (FLG x M)
- 16 INSTALL 8" CROSS (FLG), 1-8" ADAPTER (FLGxM) AND 3-8" VALVES (FLGxM)
- 17 INSTALL 1" DOMESTIC WATER SERVICE WITH 1" METER AND SETTING PER WATER NOTE #2 ON SHEET C1. DUE TO VERTICAL SEPARATION DISTANCES TO SEWER MAIN, ALL WATER SERVICES CROSSING A SEWER MAIN SHALL BE SLEEVED WITH 2"-3" WATER SERVICE CLASS PIPE FOR A DISTANCE OF 5' ON EACH SIDE OF THE SEWER MAIN
- 18 INSTALL 3/4" LF OF 2" WATER SERVICE WITH 1.5" METER & SETTING PER WATER NOTE #8 ON SHEET C1 WITH BACK-FLOW PREVENTION DEVICE CONNECTING TO FINE IRRIGATION SYSTEM. COORDINATE WITH GARDEN CITY PUBLIC WORKS FOR APPROVED CROSS CONNECTION
- 19 APPROXIMATE LOCATION OF NEW LIGHT POLE. SEE ELECTRICAL PLANS
- 20 INSTALL NEW 2" BLOW-OFF ASSEMBLY SIMILAR TO I.S.P.W.C. SD-405
- 21 INSTALL 2" PVC SLEEVE FOR FINE IRRIGATION AND ELECTRICAL CONDUIT BY OTHERS.
- 22 INSTALL 4" PVC SLEEVE FOR FINE IRRIGATION AND ELECTRICAL CONDUIT BY OTHERS
- 23 HOT TAP EXISTING 12" WATER MAIN VIA 12"x1" TAPPING SLEEVE. COORDINATE WITH GARDEN CITY PUBLIC WORKS. INSTALL 1" DOMESTIC WATER SERVICE WITH 1" METER AND SETTING PER WATER NOTE #2 ON SHEET C1. DUE TO VERTICAL SEPARATION DISTANCES TO NEW STORM DRAIN LINE, ALL WATER SERVICES CROSSING THE NEW STORM DRAIN LINE SHALL BE SLEEVED WITH 2"-3" WATER SERVICE CLASS PIPE FOR A DISTANCE OF 5' ON EACH SIDE OF THE STORM DRAIN LINE. REPAIR PAVEMENT AS NEEDED PER ACHD PAVEMENT REPAIR NOTES ON SHEET C3
- 24 APPROXIMATE LOCATION OF NEW ELECTRICAL TRANSFORMER. COORDINATE WITH IDAHO POWER COMPANY
- 25 APPROXIMATE LOCATION OF NEW ELECTRICAL JUNCTION BOX. COORDINATE WITH IDAHO POWER COMPANY

UTILITY NOTES

1. CONTRACTOR TO COORDINATE LOCATION OF THE JOINT TRENCH AND SUBMIT PLANS TO THE ENGINEER FOR APPROVALS.
2. ALL WATER VALVES SHALL BE PER I.S.P.W.C. SD-408.

BENCH MARKS DATUM NAVD 88

TBM #1	ELEV. 2651.25	SCRIBED "X" IN PAVEMENT BEHIND THE SIDEWALK IN THE NORTHWEST QUADRANT OF THE INTERSECTION OF E. 42nd STREET AND ADAMS STREET
TBM #2	ELEV. 2650.67	SCRIBED "X" IN SIDEWALK APPROXIMATELY 16 FEET NORTHEASTERLY FROM THE NORTHEASTERLY PROPERTY CORNER



AGENCY REVIEW NOT APPROVED FOR CONSTRUCTION

HUTCHISON SMITH ARCHITECTS

270 North 27th St. Boise, Idaho 83702 (208) 338-1212 Fax (208) 338-0111

PROJECT: RSC 16-14
 FILE: Parkway UTLL.dwg
 DATE: June 1, 2016
 DRAWN: JDF
 REVISIONS:

MIXED USE RESIDENTIAL PARKWAY STATION
 E. 42nd ST
 UTILITY PLAN

GARDEN CITY, ID.

6

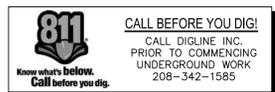
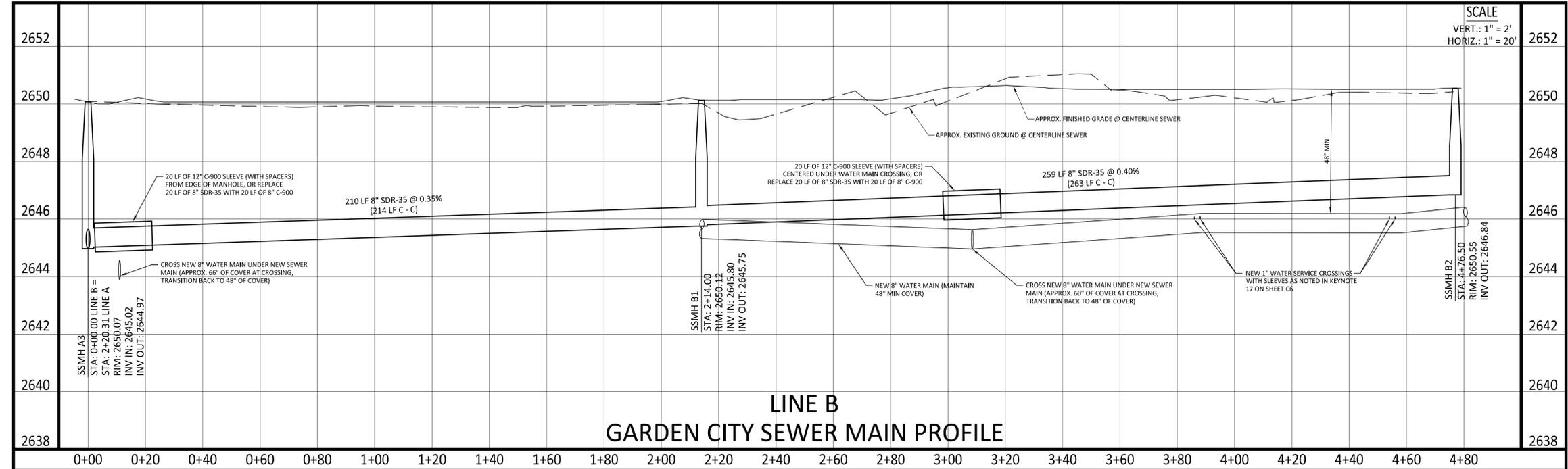
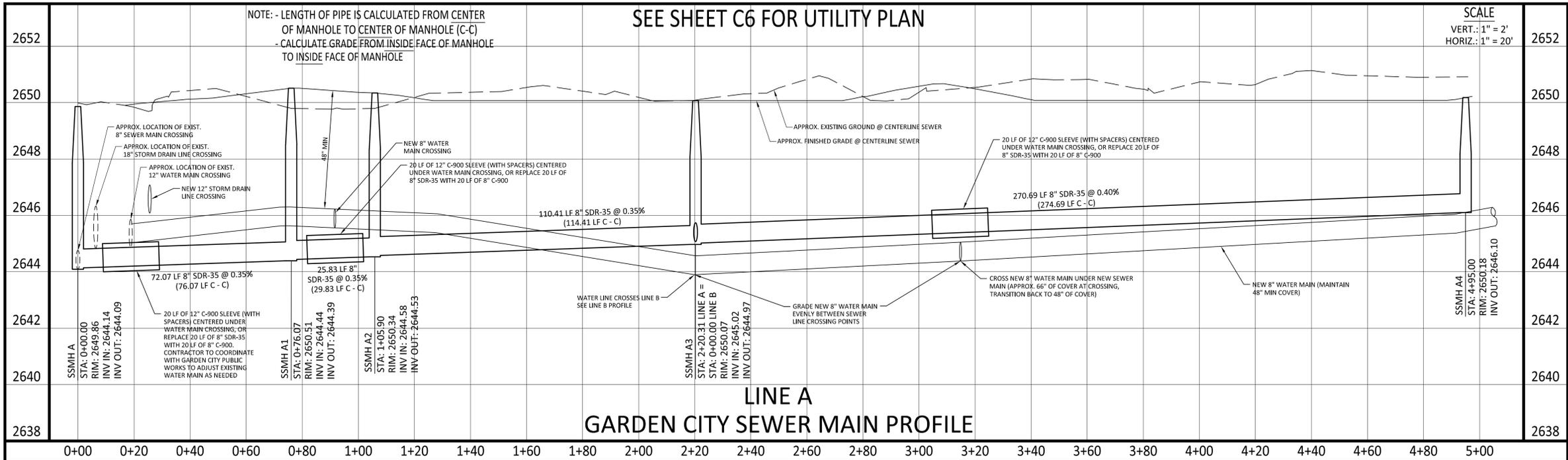
PROFESSIONAL ENGINEER
 No. 10692
 STATE OF IDAHO
 J.W.E. COSLETT

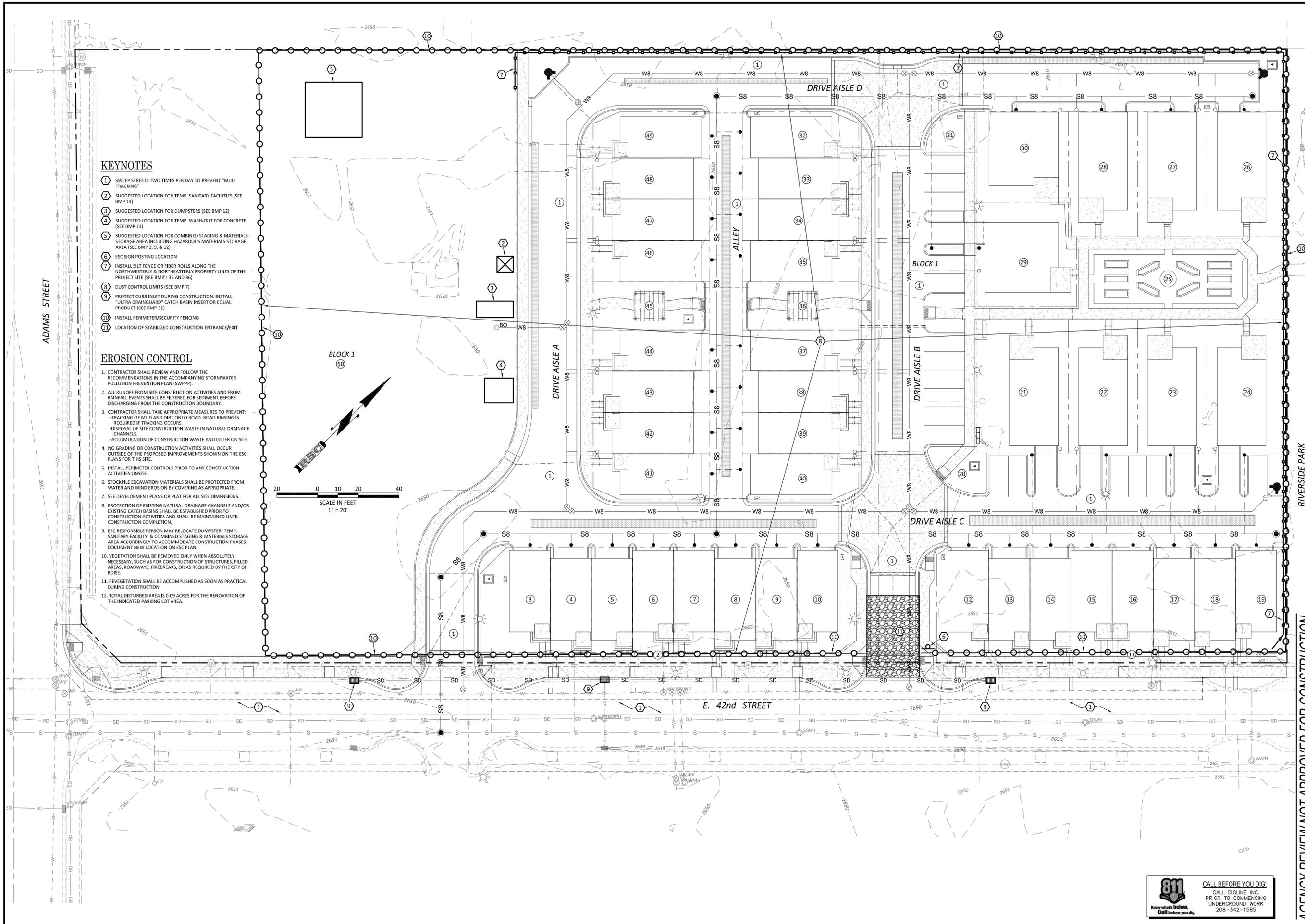
AGENCY REVIEW NOT APPROVED FOR CONSTRUCTION

811 CALL BEFORE YOU DIG!
 CALL DIGLINE INC. PRIOR TO COMMENCING UNDERGROUND WORK
 208-342-1585

SHEET NO. **6**

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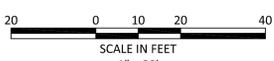


KEYNOTES

- 1 SWEEP STREETS TWO TIMES PER DAY TO PREVENT "MUD TRACKING"
- 2 SUGGESTED LOCATION FOR TEMP. SANITARY FACILITIES (SEE BMP 14)
- 3 SUGGESTED LOCATION FOR DUMPSTERS (SEE BMP 12)
- 4 SUGGESTED LOCATION FOR TEMP. WASH-OUT FOR CONCRETE (SEE BMP 13)
- 5 SUGGESTED LOCATION FOR COMBINED STAGING & MATERIALS STORAGE AREA INCLUDING HAZARDOUS MATERIALS STORAGE AREA (SEE BMP 2, 9, & 12)
- 6 ESC SIGN POSTING LOCATION
- 7 INSTALL SILT FENCE OR FIBER ROLLS ALONG THE NORTHWESTERLY & NORTHEASTERLY PROPERTY LINES OF THE PROJECT SITE (SEE BMP'S 35 AND 36)
- 8 DUST CONTROL LIMITS (SEE BMP 7)
- 9 PROTECT CURB INLET DURING CONSTRUCTION. INSTALL "ULTRA DRAIN GUARD" CATCH BASIN INSERT OR EQUAL PRODUCT (SEE BMP 31)
- 10 INSTALL PERIMETER/SECURITY FENCING
- 11 LOCATION OF STABILIZED CONSTRUCTION ENTRANCE/EXIT

EROSION CONTROL

1. CONTRACTOR SHALL REVIEW AND FOLLOW THE RECOMMENDATIONS IN THE ACCOMPANYING STORMWATER POLLUTION PREVENTION PLAN (SWPPP).
2. ALL RUNOFF FROM SITE CONSTRUCTION ACTIVITIES AND FROM RAINFALL EVENTS SHALL BE FILTERED FOR SEDIMENT BEFORE DISCHARGING FROM THE CONSTRUCTION BOUNDARY.
3. CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO PREVENT:
 - TRACKING OF MUD AND DIRT ONTO ROAD. ROAD RINSING IS REQUIRED IF TRACKING OCCURS.
 - DISPOSAL OF SITE CONSTRUCTION WASTE IN NATURAL DRAINAGE CHANNELS.
 - ACCUMULATION OF CONSTRUCTION WASTE AND LITTER ON SITE.
4. NO GRADING OR CONSTRUCTION ACTIVITIES SHALL OCCUR OUTSIDE OF THE PROPOSED IMPROVEMENTS SHOWN ON THE ESC PLANS FOR THIS SITE.
5. INSTALL PERIMETER CONTROLS PRIOR TO ANY CONSTRUCTION ACTIVITIES ONSITE.
6. STOCKPILE EXCAVATION MATERIALS SHALL BE PROTECTED FROM WATER AND WIND EROSION BY COVERING AS APPROPRIATE.
7. SEE DEVELOPMENT PLANS OR PLAN FOR ALL SITE DIMENSIONS.
8. PROTECTION OF EXISTING NATURAL DRAINAGE CHANNELS AND/OR EXISTING CATCH BASINS SHALL BE ESTABLISHED PRIOR TO CONSTRUCTION ACTIVITIES AND SHALL BE MAINTAINED UNTIL CONSTRUCTION COMPLETION.
9. ESC RESPONSIBLE PERSON MAY RELOCATE DUMPSTER, TEMP. SANITARY FACILITY, & COMBINED STAGING & MATERIALS STORAGE AREA ACCORDINGLY TO ACCOMMODATE CONSTRUCTION PHASES. DOCUMENT NEW LOCATION ON ESC PLAN.
10. VEGETATION SHALL BE REMOVED ONLY WHEN ABSOLUTELY NECESSARY, SUCH AS FOR CONSTRUCTION OF STRUCTURES, FILLED AREAS, ROADWAYS, FIREBREAKS, OR AS REQUIRED BY THE CITY OF BOISE.
11. REVEGETATION SHALL BE ACCOMPLISHED AS SOON AS PRACTICAL DURING CONSTRUCTION.
12. TOTAL DISTURBED AREA IS 0.09 ACRES FOR THE RENOVATION OF THE INDICATED PARKING LOT AREA.



PROJECT: RSC 16-14
 FILE: Parkway ESCdwg
 DATE: Jun 1, 2016
 DRAWN: JDF
 REVISIONS:

ROCK SOLID CIVIL
 Civil Engineering and Land Development Consulting
 270 North 27th Street, Boise, ID 83702
 Office Phone: 208.342.3277
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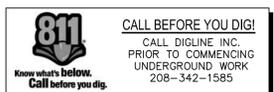


AGENCY REVIEW NOT APPROVED FOR CONSTRUCTION

MIXED USE RESIDENTIAL
PARKWAY STATION
 E 42nd St
STORMWATER POLLUTION PREVENTION PLAN

GARDEN CITY, ID.

SHEET NO.
ESC1



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Vicinity Map

Parkway Station

E. 42nd St. & Adams St. / Garden City

SE ¼, SW ¼, Sec-32, T-4N, R-2E

