

CPD RECEIVED 1/4/17

SHT #

CE.04

TITLE

COVER SHEET SITE PLAN LEGEND INDEX

VERTICAL - HORIZONTAL CONTROL PLAN

EXISTING TOPO SHEET SCHOOL

EXISTING TOPO SHEET STREETS

TESC NOTES & DETAILS

GRADING PLAN - BUILDING

CONSTRUCTION DETAILS

WATER DETAILS & NOTES

<u>LEGEND</u>

RIGHT OF WAY

PROPERTY LINE

LIMITS OF PROJECT

FENCE

EDGE OF PAVEMENT

STORM DRAINAGE

FOOTING DRAIN

ROOF DRAIN

SEWER LINE

WATER LINE

POWER

TELEPHONE

BUILDING

PAVEMENT HATCH

SIDEWALK HATCH

WOOD CHIP PLAY AREA

TRANSFORMER

JUNCTION BOX

LUMINAIRE

TELEPHONE VAULT

WATER VALVE

HYDRANT

WATER METER

FIRE DEPARTMENT CONNECTION

CATCH BASIN TYPE 1

CATCH BASIN TYPE 2

DOWNSPOUT DRAIN

SANITARY SEWER MANHOLE

SANITARY SEWER

CLEANOUT

PROPOSED

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11 11 :

DEMO PLAN

TESC PLAN

CE.11 DRAINAGE PLAN

EXISTING

GRADING PLAN

DRAINAGE DETAILS

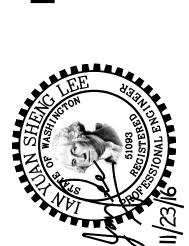
DRAINAGE DETAILS

CE.14 WATER PLAN & PROFILE

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ISSUE: BID SET NOVEMBER 28, 2016

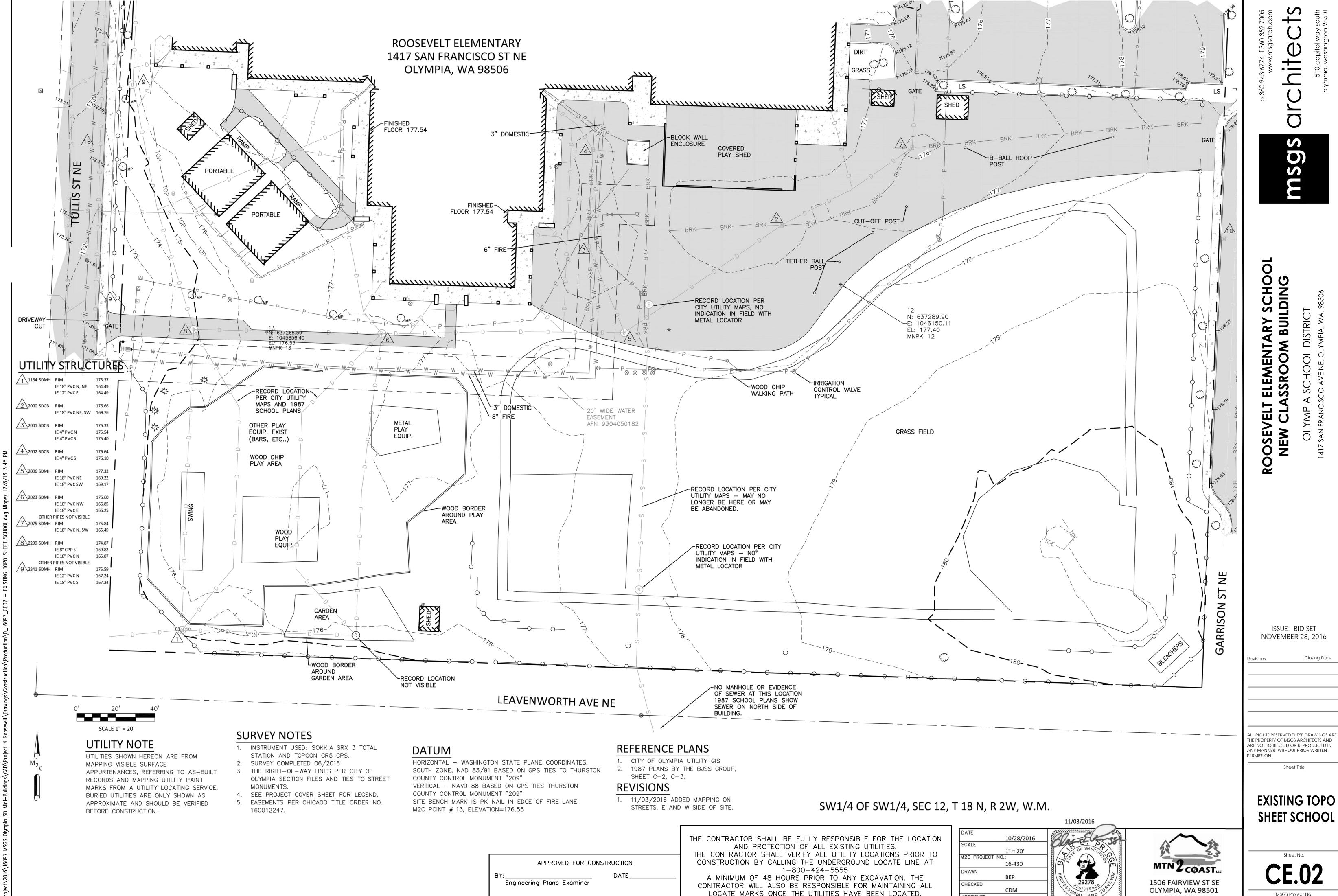
ADDENDUM **3** 12/12/2016

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COVER SHEET SITE PLAN LEGEND **INDEX**

16-111

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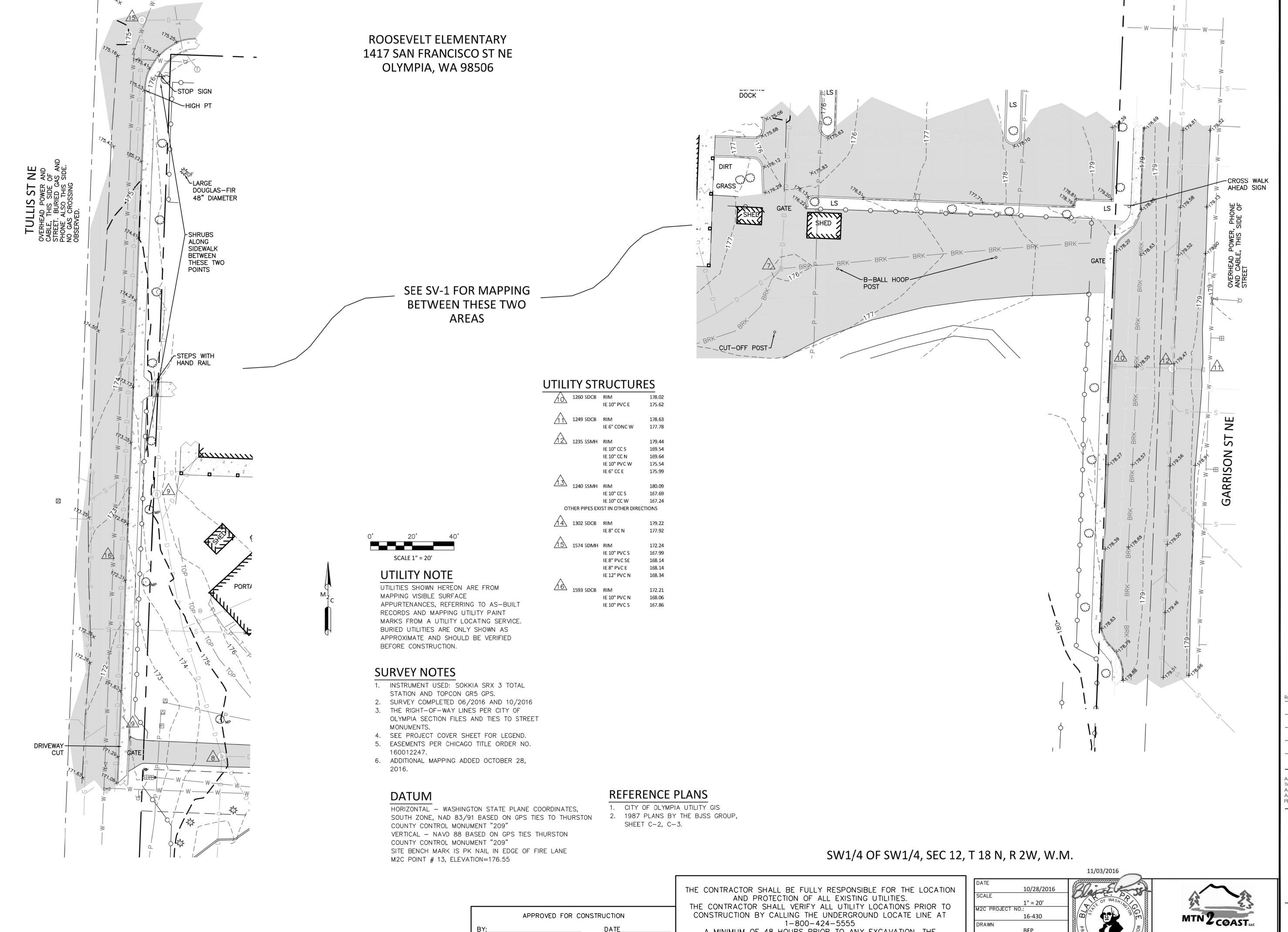
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EXISTING TOPO

MSGS Project No. 360.239.1497 16-111

APPROVED



Engineering Plans Examiner

APPROVAL EXPIRES: ____

Sg

ELEMENTARY SCHOOL SSROOM BUILDING

ROOSEVELT E

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NOVEMBER 28, 2016

Closing Date Revisions

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Sheet Title

EXISTING TOPO SHEET SCHOOL

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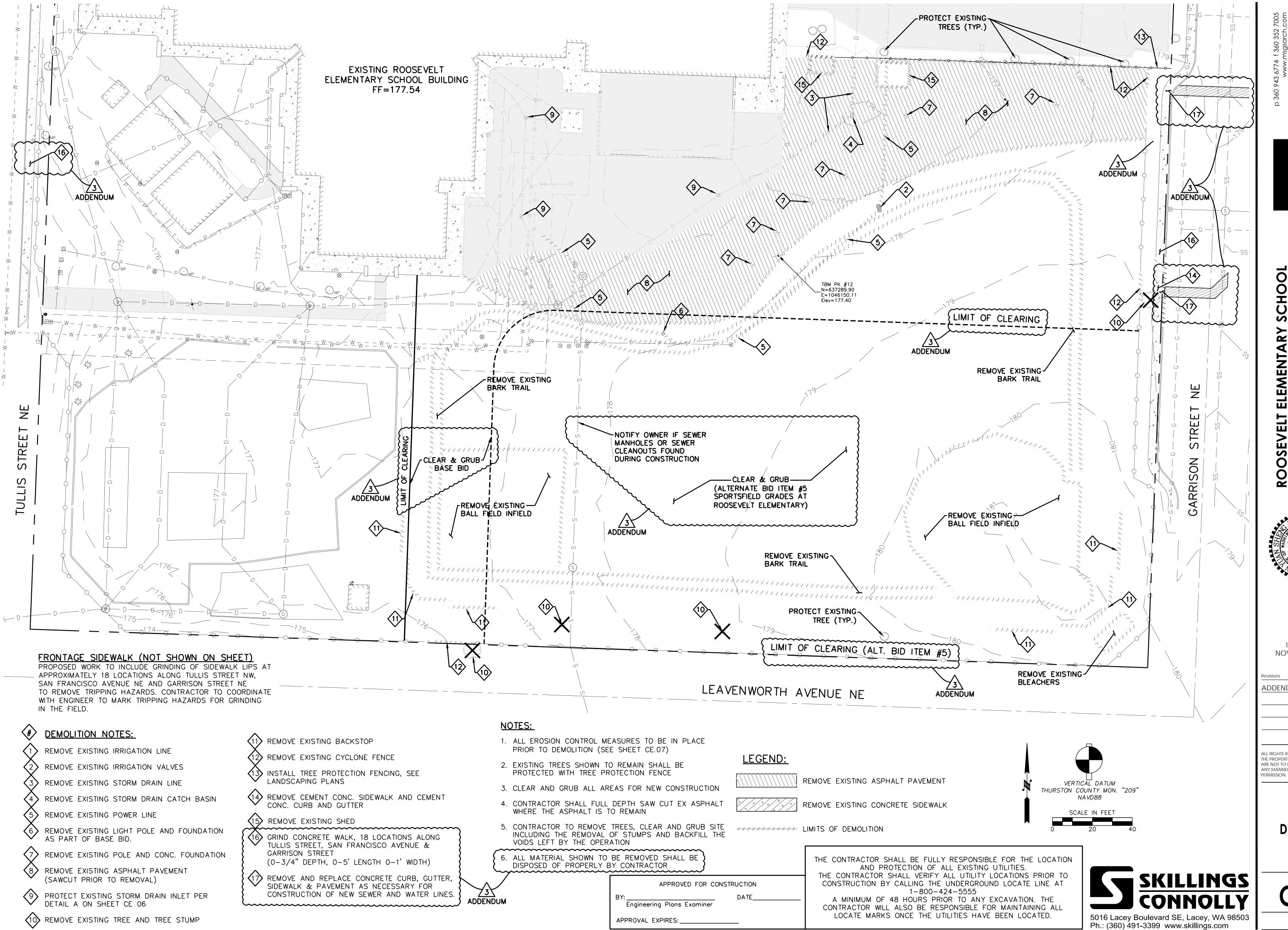
1-800-424-5555

A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR MAINTAINING ALL LOCATE MARKS ONCE THE UTILITIES HAVE BEEN LOCATED.

DRAWN CHECKED APPROVED

CDM

1506 FAIRVIEW ST SE OLYMPIA, WA 98501 360.239.1497



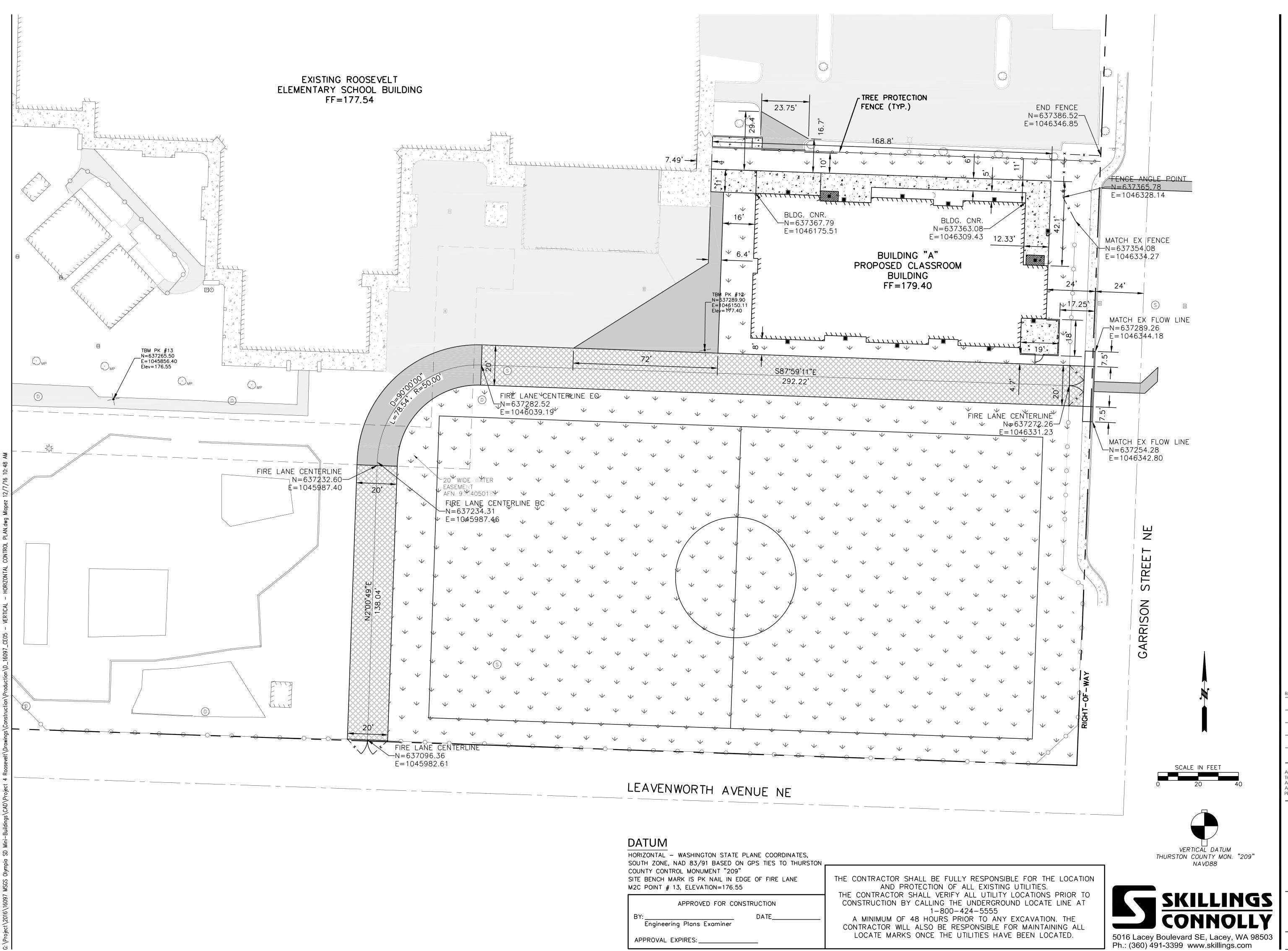


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DEMO PLAN



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JING DING

CLASSROOM BUILDIN



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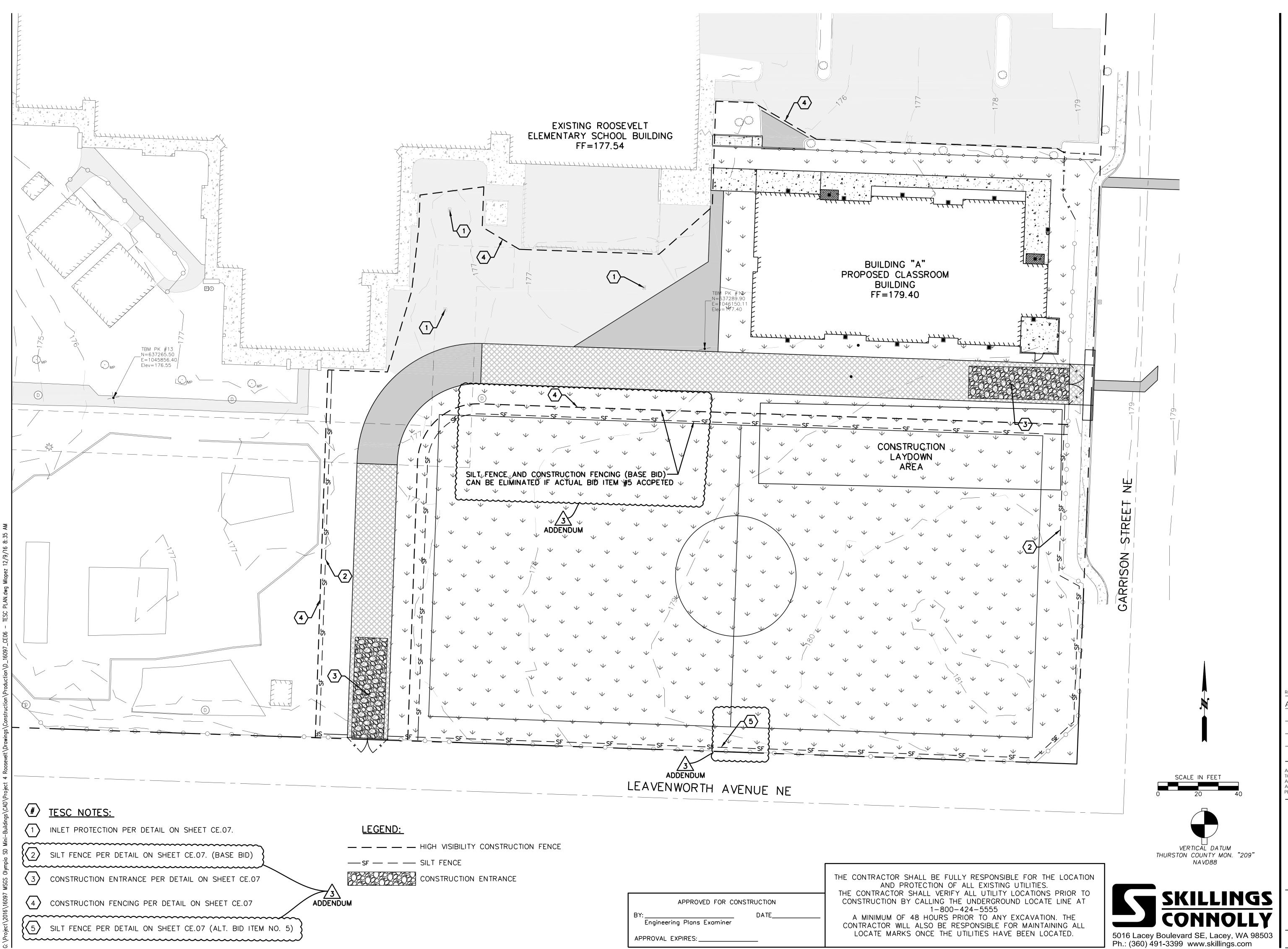
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Sheet

VERTICAL -HORIZONTAL CONTROL PLAN

Sheet No.





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TESC PLAN

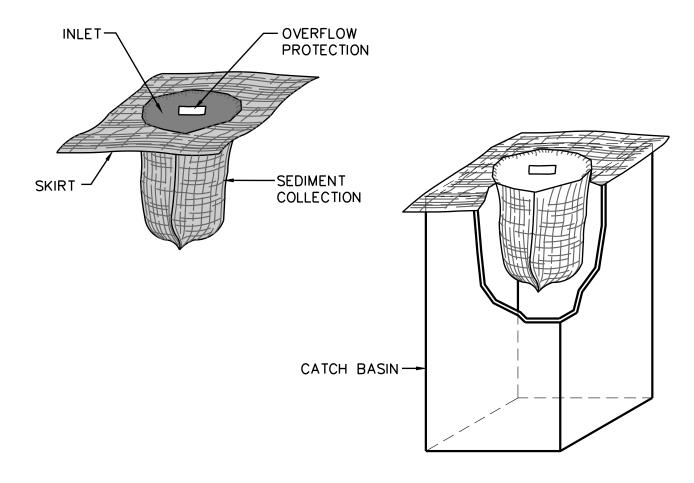
2. A CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (CESCL) IS REQUIRED FOR ALL CONSTRUCTION PROJECTS. THE NAMED PERSON OR FIRM SHALL BE ON-SITE OR ON-CALL AT ALL TIMES. FOR THIS SITE, THE PERSON/FIRM IS ______

AND THEIR OFFICE AND CELL TELEPHONE NUMBERS ARE,

- 3. APPROVAL OF THIS EROSION/SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT STREET OR DRAINAGE DESIGN (E.G. SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
- 4. THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.
- 5. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE APPLICANT/CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
- 6. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
- 7. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.
- 8. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT—LADEN WATER DO NOT LEAVE THE SITE.
- 9. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
- 10. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN 48 HOURS FOLLOWING A MAJOR STORM EVENT.
- 11. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A TRAPPED CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.
- 12. ROADS SHALL BE CLEANED THOROUGHLY AS NEEDED TO PROTECT DOWNSTREAM WATER RESOURCES OR STORMWATER INFRASTRUCTURE. SEDIMENT SHALL BE REMOVED FROM ROADS BY SHOVELING OR PICKUP SWEEPING AND SHALL BE TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.
- 13. FROM OCTOBER 15 THROUGH APRIL 1, NO SOILS SHALL REMAIN EXPOSED AND UNWORKED FOR MORE THAN 2 DAYS. FROM APRIL 2 TO OCTOBER 14, NO SOILS SHALL REMAIN EXPOSED AND UNWORKED FOR MORE THAN 7 DAYS. SOILS SHALL BE STABILIZED AT THE END OF THE SHIFT BEFORE A HOLIDAY OR WEEKEND IF NEEDED BASED ON THE WEATHER FORECAST. LINEAR CONSTRUCTION ACTIVITIES, SUCH AS RIGHT—OF—WAY AND EASEMENT CLEARING, ROADWAY DEVELOPMENT, PIPELINES, AND TRENCHING FOR UTILITIES, SHALL COMPLY WITH THESE REQUIREMENTS. THESE STABILIZATION REQUIREMENTS APPLY TO ALL SOILS ON SITE, WHETHER AT FINAL GRADE OR NOT. THE LOCAL PERMITTING AUTHORITY MAY ADJUST THESE TIME LIMITS IF IT CAN BE SHOWN THAT A DEVELOPMENT SITE'S EROSION OR RUNOFF POTENTIAL JUSTIFIES A DIFFERENT STANDARD.
- 14. FROM OCTOBER 15 THROUGH APRIL 1, CLEARING, GRADING, AND OTHER SOIL-DISTURBING ACTIVITIES SHALL ONLY BE PERMITTED IS SHOWN TO THE SATISFACTION OF THE LOCAL PERMITTING AUTHORITY THAT THE TRANSPORT OF SEDIMENT FROM THE CONSTRUCTION SITE TO RECEIVING WATERS WILL BE PREVENTED.
- 15. SOIL STOCKPILES MUST BE STABILIZED AND PROTECTED WITH SEDIMENT-TRAPPING MEASURES.
- 16. ALL POLLUTANTS, INCLUDING WASTE MATERIALS AND DEMOLITION DEBRIS, THAT OCCUR ON SITE DURING CONSTRUCTION SHALL BE HANDLED AND DISPOSED OF IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORMWATER. WOODY DEBRIS MAY BE CHOPPED AND SPREAD ON SITE.
- 17. MAINTENANCE AND REPAIR OF HEAVY EQUIPMENT AND VEHICLES AND OTHER ACTIVITIES WHICH MAY RESULT IN DISCHARGE OR SPILLAGE OF POLLUTANTS TO THE GROUND OR INTO STORMWATER RUNOFF MUST BE CONDUCTED USING SPILL PREVENTION MEASURES, SUCH AS DRIP PANS. RE[PORT ALL SPILLS TO 911.
- 18. WATER FROM MOST DEWATERING OPERATIONS SHALL BE DISCHARGED INTO A SEDIMENT TRAP OR POND. CLEAN, NOT-TURBID WATER MAY BE DISCHARGED TO STATE SURFACE WATERS, PROVIDED THE DISCHARGE DOES NOT CAUSE EROSION OR FLOODING. HIGHLY TURBID OR CONTAMINATED DEWATERING WATER FROM CONSTRUCTION EQUIPMENT OPERATION, CLAMSHELL DIGGING, CONCRETE TREMIE POUR, OR WORK INSIDE A COFFERDAM SHALL BE HANDLED SEPARATELY FROM STORMWATER AND PROPERLY DISPOSED.

GENERAL NOTES:

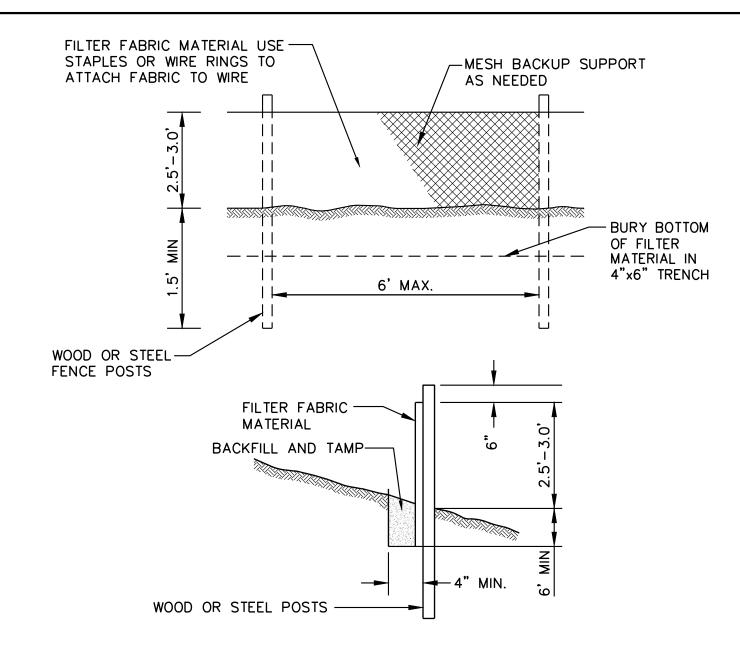
- 1. ALL WORK AND MATERIALS SHALL BE COMPLETED IN ACCORDANCE WITH THE MOST CURRENT "STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION" FROM THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION, THE CITY OF OLYMPIA ENGINEERING DESIGN AND DEVELOPMENT STANDARDS (EDDS), THE CITY OF OLYMPIA SUPPLEMENTAL SPECIFICATIONS AND THE CONTRACT SPECIFICATIONS AND SPECIAL PROVISIONS.
- 2. UNLESS NOTED OTHERWISE, UTILITIES SHOWN ON THE PLAN AND PROFILE ARE EXISTING, AND ARE LOCATED TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PRINTING. THE CONTRACTOR SHALL VERIFY PRIOR TO CONSTRUCTION AND TAKE EXTRAORDINARY CARE WHEN EXCAVATING NEAR OR AROUND UTILITY CROSSINGS INCLUDING "HAND" EXCAVATION AND POT HOLING. IN THE EVENT OF A CONFLICT, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND THE PRIVATE UTILITY TO RAISE, RELOCATE, OR LOWER THE CONFLICTING APPURTENANCES.
- 3. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING 811, THE UNDERGROUND LOCATE LINE, A MINIMUM OF 48 HOURS (TWO WORKING DAYS) PRIOR TO ANY EXCAVATION. UNDERGROUND LOCATES WILL BE PERFORMED ONCE. IT IS THE RESPONSIBILITY OF THE REQUESTER TO MAINTAIN THE MARKINGS AFTER THE INITIAL LOCATE IN ACCORDANCE WITH RCW 19.122.
- 4. EROSION CONTROL SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE "DRAINAGE DESIGN AND EROSION CONTROL MANUAL FOR OLYMPIA" (DRAINAGE MANUAL).
- CONTRACTOR SHALL COORDINATE WITH PRIVATE UTILITIES WHEN EXCAVATING NEAR FIBER OPTIC TELEPHONE LINES, GAS LINES AND POWER POLES.
- 6. CONTRACTOR SHALL PROTECT ALL TREES AND VEGETATION THAT ARE NOT TO BE REMOVED AS DIRECTED BY THE ENGINEER.
- 7. ALL DRAINAGE STRUCTURES, SANITARY MANHOLES, WATER METERS, WATER VALVES OR OTHER APPURTENANCES SHALL BE ADJUSTED TO FINAL GRADE BY THE CONTRACTOR UNLESS OTHERWISE NOTED ON THE PLANS.
- 8. CONTRACTOR SHALL MAINTAIN FUNCTION OF ALL EXISTING UTILITIES DURING CONSTRUCTION
- 9. CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE EXISTING SIDEWALK AND ROAD SURFACES OUTSIDE OF THE PROJECT LIMITS. ALL DAMAGE OR UNDERMINING SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO IMMEDIATELY REPAIR TO CITY STANDARDS AT THE CONTRACTOR'S EXPENSE.
- 10. ALL EXISTING SIGNS THAT INTERFERE WITH CONSTRUCTION SHALL BE RELOCATED AS DIRECTED BY THE ENGINEER.
- 11. ACCESS TO PRIVATE PROPERTY SHALL BE MAINTAINED AT ALL TIMES UNLESS PRIOR APPROVAL AND COORDINATION HAS OCCURRED.
- 12. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL IN ACCORDANCE WITH THE U.S. DEPARTMENT OF TRANSPORTATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). PRIOR TO DISRUPTION OF ANY TRAFFIC, TRAFFIC CONTROL PLANS WILL BE PREPARED AND SUBMITTED TO THE CITY FOR APPROVAL. NO WORK WILL COMMENCE UNTIL ALL APPROVED TRAFFIC CONTROL IS IN PLACE.
- 13. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE A COPY OF THE APPROVED CONSTRUCTION PLANS ON SITE AT ALL TIMES.
- 14. ANY CHANGES TO THE DESIGN SHALL FIRST BE REVIEWED AND APPROVED BY THE ENGINEER.
- 15. A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH THE CITY PRIOR TO THE START OF CONSTRUCTION.
- 16. CITY OF OLYMPIA DATUM, NAVD 88, SHALL BE USED FOR ALL VERTICAL CONTROL. A LIST OF BENCHMARKS IS AVAILABLE FROM THE PUBLIC WORKS DEPARTMENT.



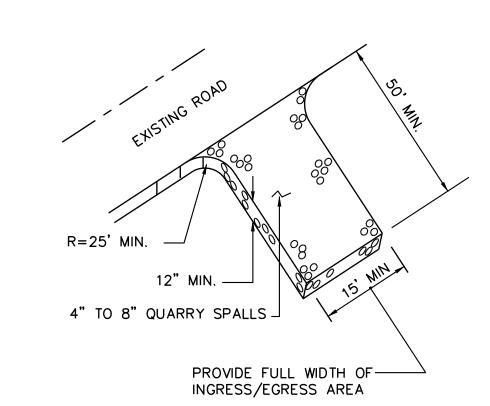
NOTE: WHEN REMOVING SILT SOCK USE ADEQUATE STAFFING TO ENSURE THE FABRIC AND SILT DOES NOT FALL INTO THE CATCH BASIN.

A SILT SOCK DETAIL

NOT TO SCALE

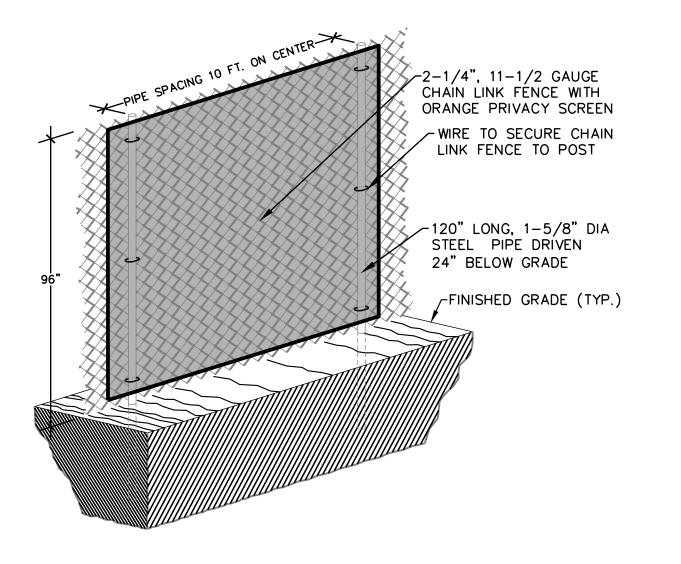


B TEMPORARY SILT FENCE



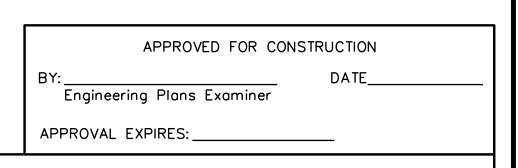
NOTE: INSTALL CONSTRUCTION ENTRANCE AT LOCATION WHERE ACCESS OFF OF A PAVED ROADWAY BEGINS.

C CONSTRUCTION ENTRANCE
NOT TO SCALE



CONSTRUCTION FENCE DETAIL

NOT TO SCALE



THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES.

THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT 1-800-424-5555

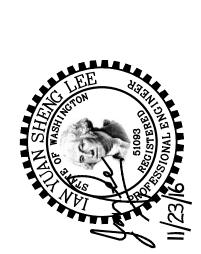
A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR MAINTAINING ALL LOCATE MARKS ONCE THE UTILITIES HAVE BEEN LOCATED.



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'ELT ELEMENTARY SCHOOR CLASSROOM BUILDING



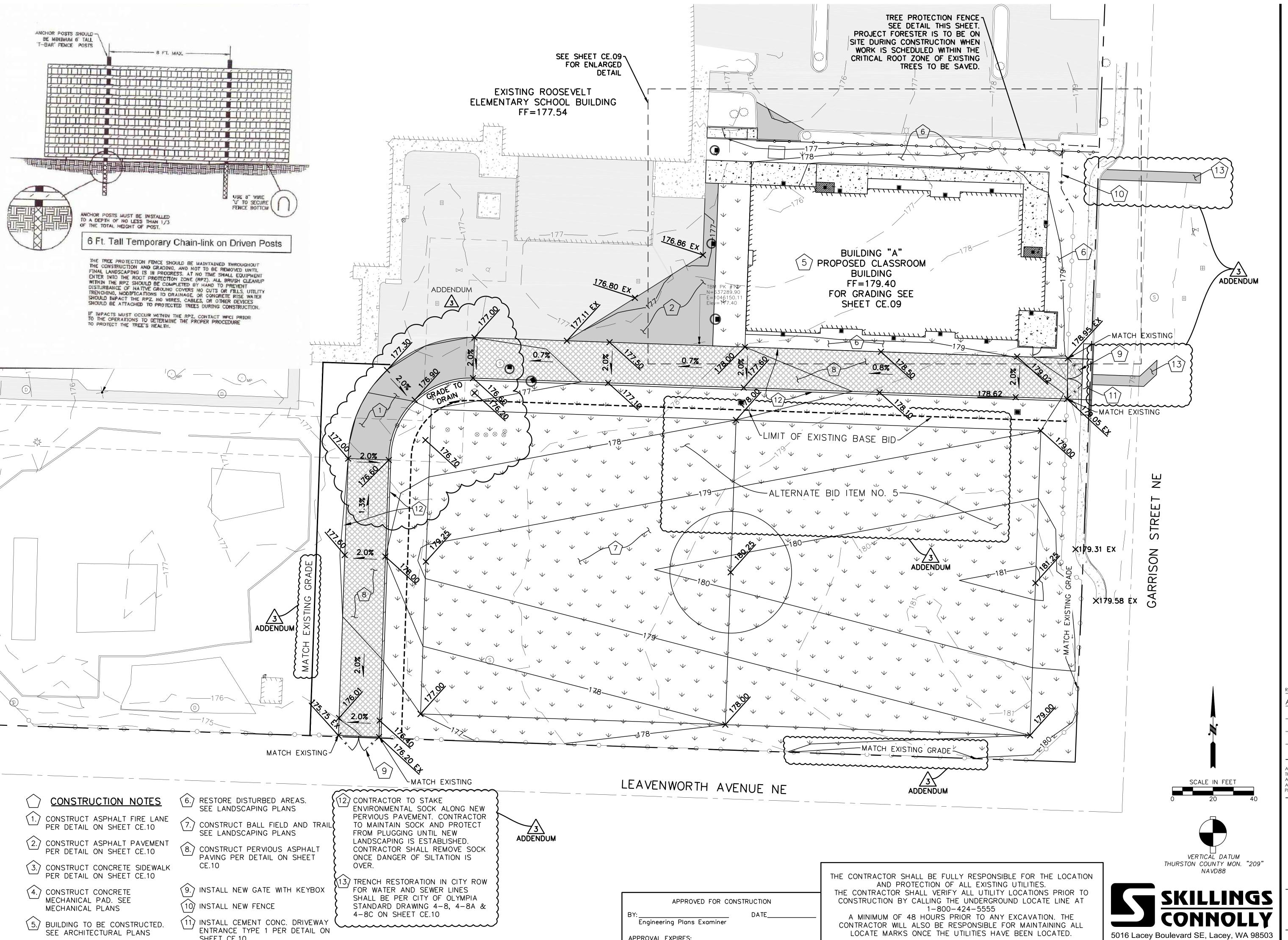
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TESC NOTES & DETAILS

CE.07



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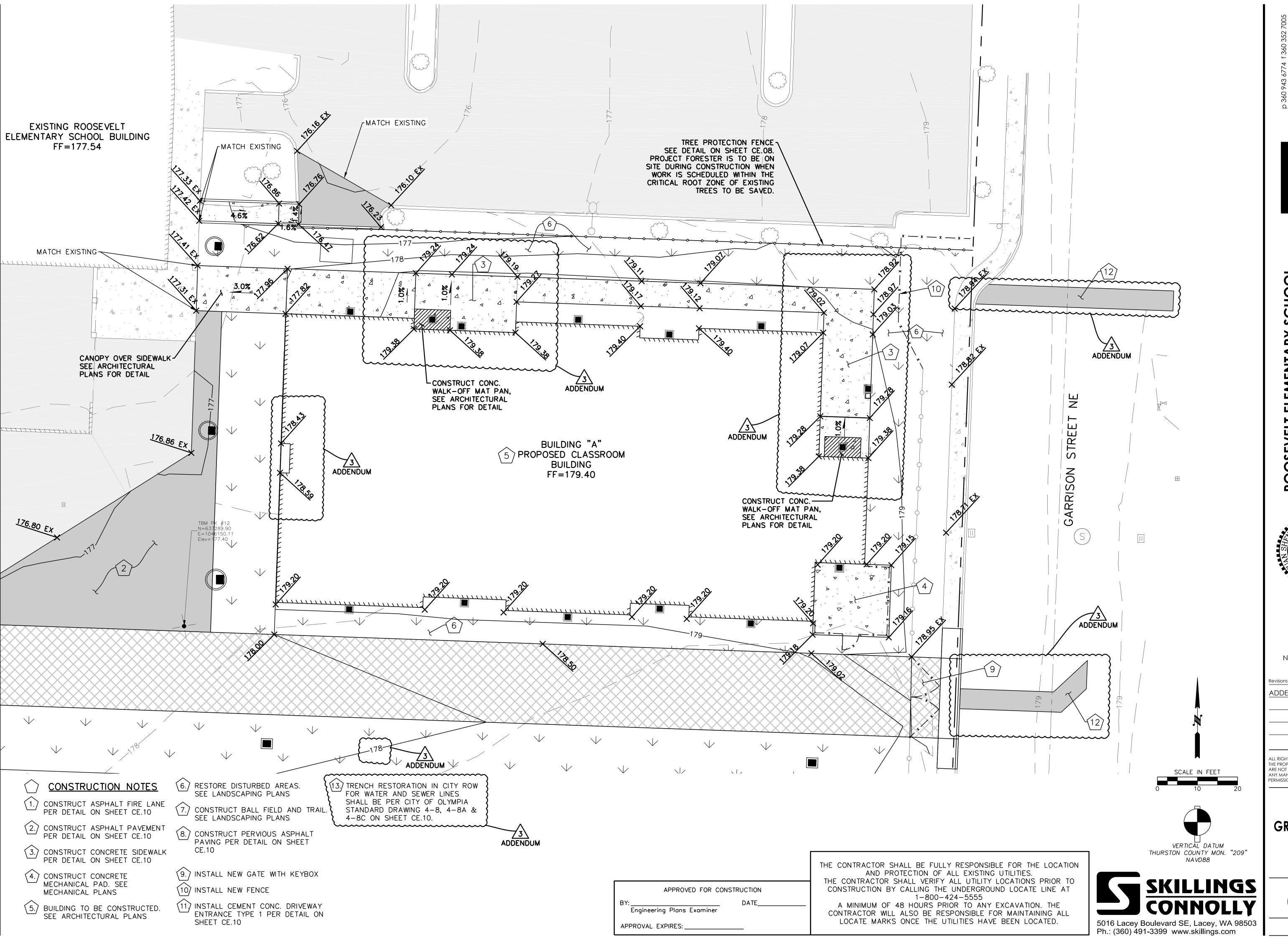
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GRADING PLAN

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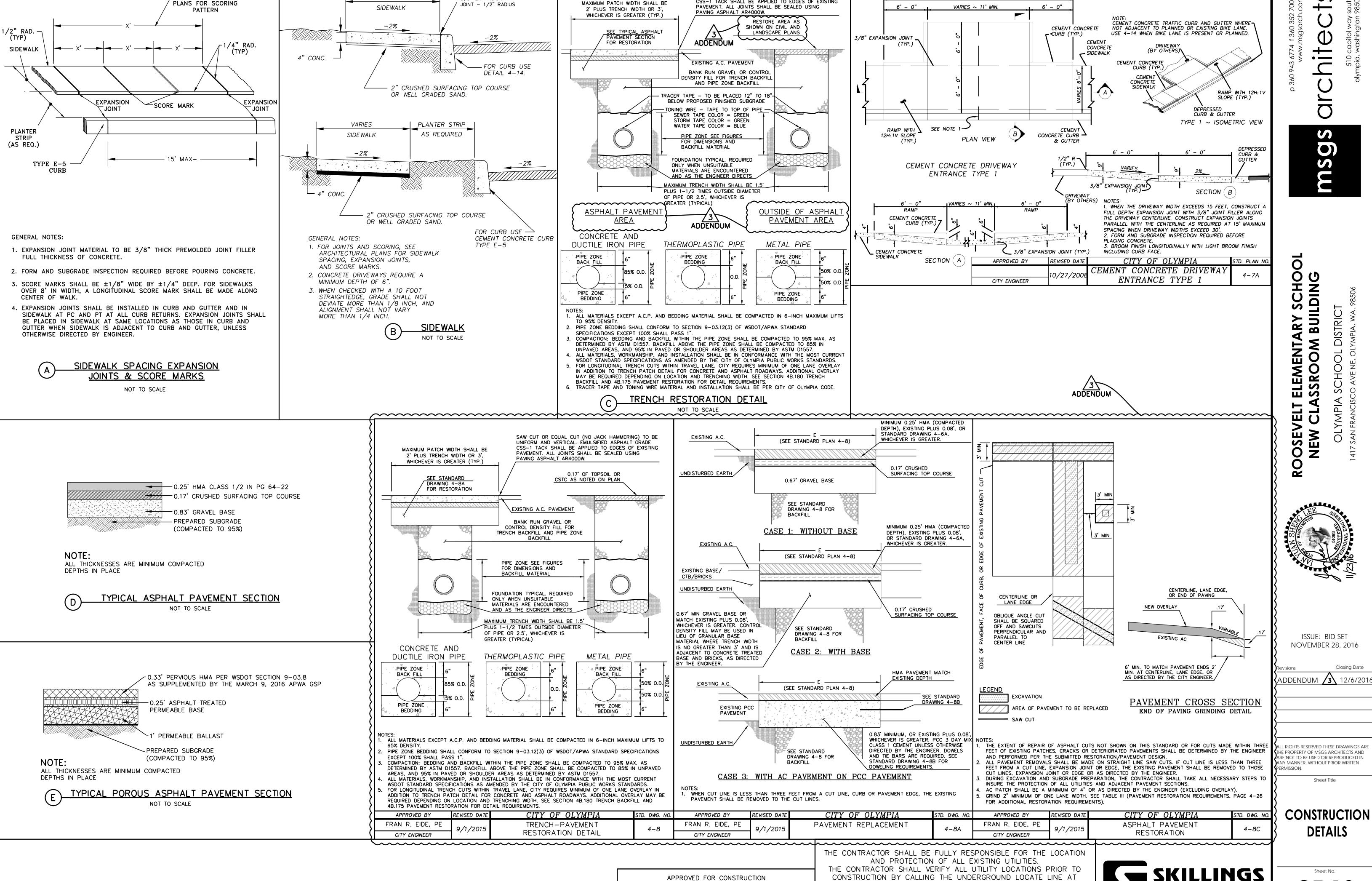


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GRADING PLAN -BUILDING



Engineering Plans Examiner

APPROVAL EXPIRES:

-SEE ARCHITECTURAL

VARIES

3/8" EXPANSION

SAW CUT OR EQUAL CUT (NO JACK HAMMERING) TO BE

CSS-1 TACK SHALL BE APPLIED TO EDGES OF EXISTING

BID ITEM (INCLUDES SIDEWALK RAMPS)

1-800-424-5555 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION. THE

CONTRACTOR WILL ALSO BE RESPONSIBLE FOR MAINTAINING ALL LOCATE MARKS ONCE THE UTILITIES HAVE BEEN LOCATED.

UNIFORM AND VERTICAL. EMULSIFIED ASPHALT GRADE

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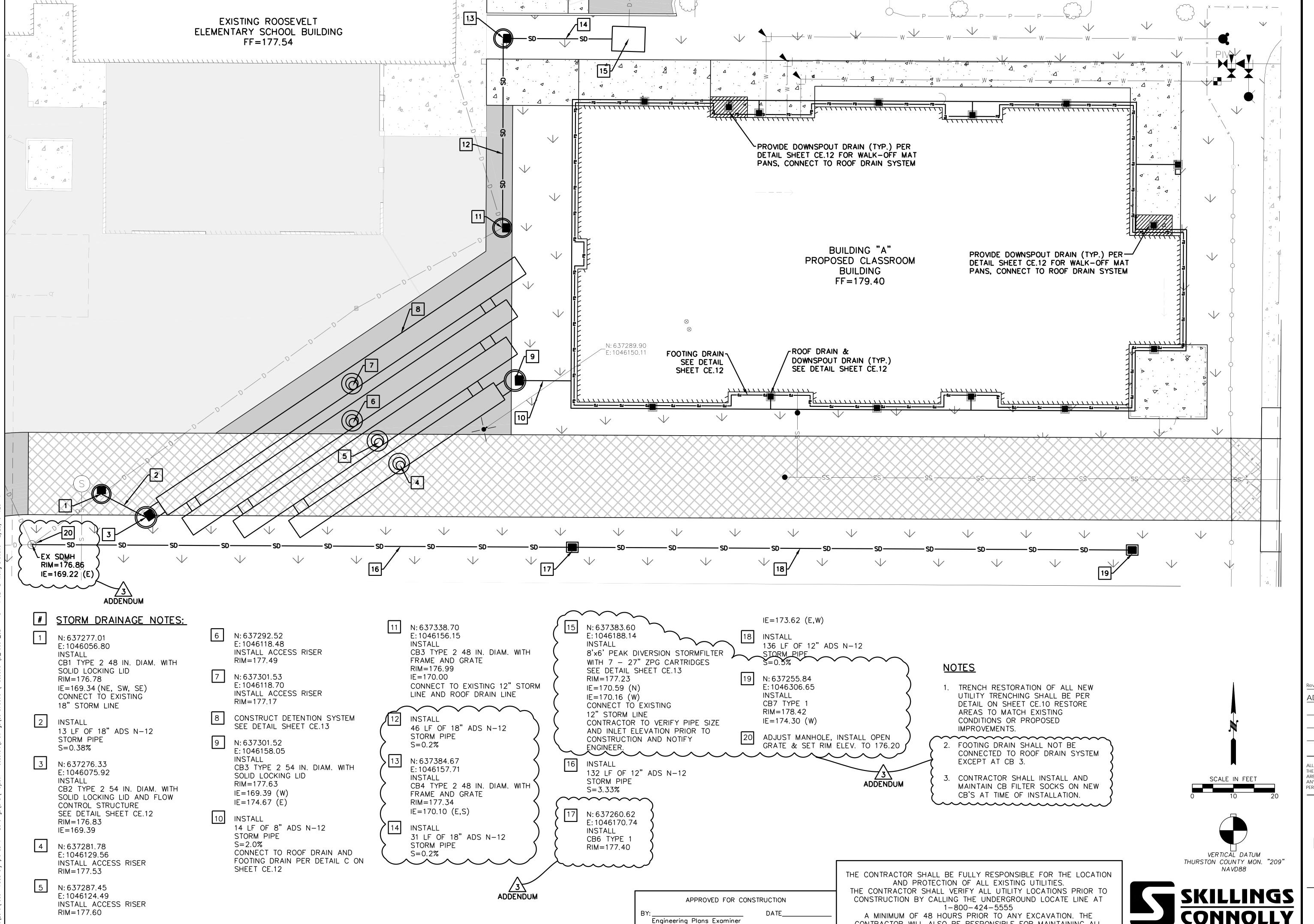
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BUILD



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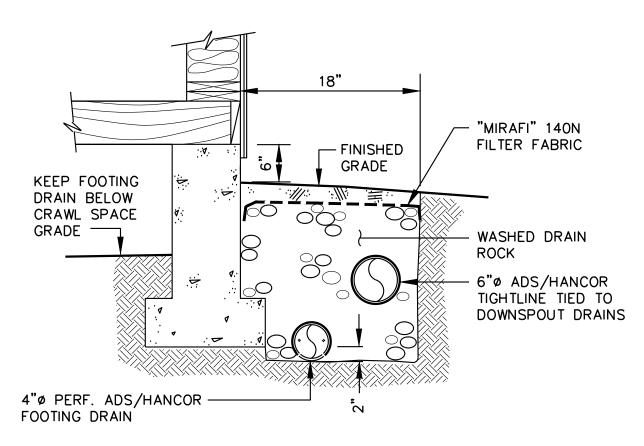
DRAINAGE PLAN

MSGS Project No. 16-111

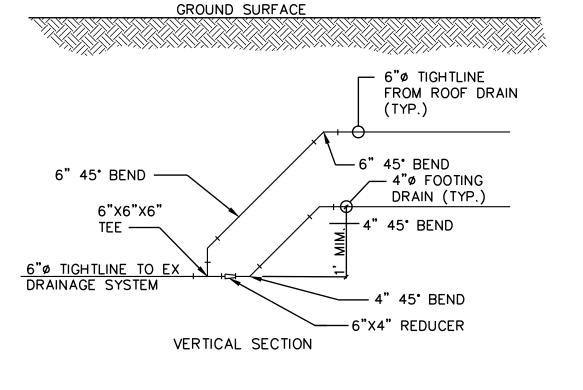
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FOOTING DRAIN DETAIL

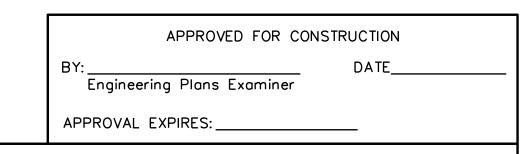


C CONNECTION DETAIL

NOT TO SCALE

ROADWAY CONSTRUCTION NOTES

- A. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE MOST CURRENT EDITION OF THE STATE OF WASHINGTON, DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THURSTON COUNTY STANDARDS.
- B. INSPECTION OF THE STORM DRAIN SYSTEM MUST BE CALLED FOR BEFORE ANY BACKFILL IS PLACED FOR THE DRAIN SYSTEM.
- C. CATCH BASINS SHALL BE TYPE 1 WITH B-2a, WSDOT STANDARD PLANS, FRAME AND GRATE UNLESS OTHERWISE NOTED. THE OUTSIDE EDGE OF THE CATCH BASIN SHALL BE PLACED AT THE INTERSECTION OF THE CURB AND GUTTER AND 0.010' TO 0.015' BELOW FINISHED GRADE, OR IN THE GUTTER LINE OF THE ROLLED EDGE SECTION.
- D. IF ADEQUATE INSPECTION IS NOT CALLED FOR BEFORE COMPLETION OF THE ROADWAY CONSTRUCTION, IT MAY BE NECESSARY FOR CORE DRILLING AND TESTING TO BE PERFORMED TO ASSURE AN ACCEPTABLE QUALITY OF ROADWAY. WHEN CORE DRILLING IS FOUND TO BE NECESSARY, THE APPLICANT WILL BE HELD RESPONSIBLE FOR ALL COSTS INCURRED.
- E. IT WILL BE THE APPLICANT'S RESPONSIBILITY TO CONTACT ALL UTILITY COMPANIES IN ORDER TO ASSURE THAT ALL LINES, PIPES, POLES AND OTHER APPURTENANCES ARE PROPERLY LOCATED AND THEIR INSTALLATION IS COORDINATED WITH THE ROAD CONSTRUCTION. ALL UTILITY RELOCATION WORK SHALL BE AT THE EXPENSE OF THE APPLICANT AND MUST BE IN ACCORDANCE WITH THURSTON COUNTY ROAD STANDARDS PRIOR TO ROAD ACCEPTANCE.
- F. CULVERT PIPE SHALL BE CONCRETE, ALUMINUM OR PLASTIC 12-INCH DIAMETER MINIMUM PIPE WITH BEVELED ENDS UNLESS OTHERWISE NOTED. BEVELED ENDS SHALL BE A MINIMUM OF 3:1 IN THE DITCH LINE OR MATCH THE SLOPE IN A CUT OR FILL SECTION.
- G. BURIED UTILITIES ARE SHOWN IN THEIR APPROXIMATE LOCATION. THE APPLICANT SHALL HAVE THE UTILITIES VERIFIED ON THE GROUND PRIOR TO ANY CONSTRUCTION.
- H. ONSITE EROSION CONTROL MEASURES SHALL BE THE RESPONSIBILITY OF THE APPLICANT AND BE IN PLACE PRIOR TO CONSTRUCTION. ANY PROBLEMS OCCURRING BEFORE FINAL ACCEPTANCE BY THURSTON COUNTY AND WITHIN 24 MONTHS THEREAFTER SHALL BE CORRECTED BY THE APPLICANT.
- I. ANY REVISIONS TO PLANS MUST BE MADE BY THE PROJECT ENGINEER AND APPROVED BY THE COUNTY PRIOR TO ANY IMPLEMENTATION IN THE FIELD.
- J. ALL PAVEMENT MARKINGS SHALL CONFORM TO THE REQUIREMENTS OF THE MUTCD AND THE THURSTON COUNTY STANDARD PAVEMENT MARKING DETAILS.
- K. BEFORE STRIPING TAKES PLACE THE APPLICANT SHALL CONTACT THE THURSTON COUNTY TRAFFIC DIVISION FOR COORDINATION OF THE STRIPING.
- L. A COPY OF THE APPROVED PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
- M. THURSTON COUNTY SHALL BE NOTIFIED 72 HOURS BEFORE CONSTRUCTION IS STARTED. THE APPLICANT SHALL BE RESPONSIBLE FOR SCHEDULING A PRE—CONSTRUCTION CONFERENCE WITH THE COUNTY. OTHER JURISDICTIONS, PROJECT ENGINEER, UTILITY COMPANIES, SUBCONTRACTORS AND OTHER NECESSARY PARTIES TO THE PROJECT SHALL BE PRESENT AT THE PRE—CONSTRUCTION CONFERENCE.
- N. SLOPES SHALL BE STABILIZED TO PREVENT EROSION. IN CASE EROSION OCCURS IN DITCHES, DITCH LINING IS TO BE PROVIDED AS REQUESTED AND SPECIFIED BY THE COUNTY.
- O. ALL TYPE 2 CATCH BASINS OVER 4 FEET IN HEIGHT SHALL HAVE STANDARD STEPS.
- P. WHERE NEWLY CONSTRUCTED PAVING MEETS EXISTING PAVING, THE APPLICANT SHALL OVERLAY AND FEATHER NEW PAVEMENT TO PROVIDE A SMOOTH TRANSITION FROM EXISTING TO PROPOSED PAVING. APPLICATION OF A THIN PAINT COAT OF EMULSIFIED ASPHALT SHALL BE APPLIED TO INSURE PROPER BONDING.
- Q. THE COMPLETED SURFACE OF ALL COURSES SHALL BE OF UNIFORM TEXTURE, SMOOTH, UNIFORM AS TO CROWN AND GRADE, AND FREE FROM DEFECTS OF ALL KINDS. THE COMPLETED SURFACE OF THE WEARING COURSE SHALL NOT VARY MORE THAN 1/8 INCH FROM THE LOWER EDGE OF A 10-FOOT STRAIGHTEDGE PLACED ON THE SURFACE PARALLEL TO THE CENTERLINE. THE TRAVERSE SLOPE OF THE COMPLETED SURFACE OF THE WEARING COURSE SHALL VARY NOT MORE THAN 1/4 INCH IN 10-FEET FROM THE RATE OF TRAVERSE SLOPE SHOWN ON THE PLANS.
- R. MATERIALS SAMPLING AND TESTING SHALL BE AT A FREQUENCY AND MAGNITUDE AS SPECIFIED IN THE STANDARD SPECIFICATIONS OR DETERMINED BY THE COUNTY ENGINEER. IN THE CASE OF PLAT ROADS, TESTING AND SAMPLING SHALL BE PERFORMED BY A PRIVATE TESTING LABORATORY. CERTIFIED TEST REPORTS SHALL BE FURNISHED FOR ALL TESTS PERFORMED BY PRIVATE TESTING LABORATORIES.
- S. ALL UTILITY WORK WITHIN EXISTING PAVEMENT REQUIRES A MINIMUM ROADWAY RECONSTRUCTION FROM THE CENTERLINE, TO INCLUDE GRINDING THE EXISTING PAVEMENT AND REPLACING IT WITH A MINIMUM 0.17' PAVEMENT.

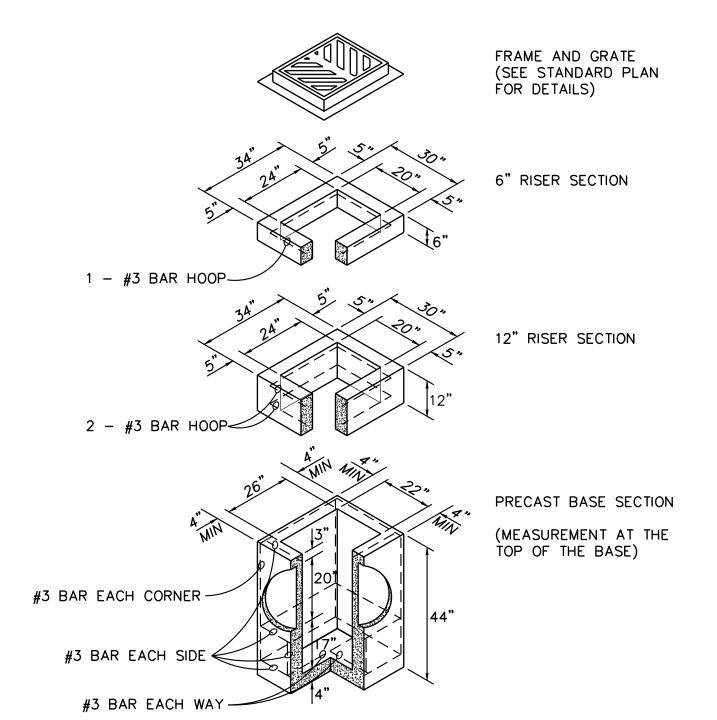


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THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT

1-800-424-5555

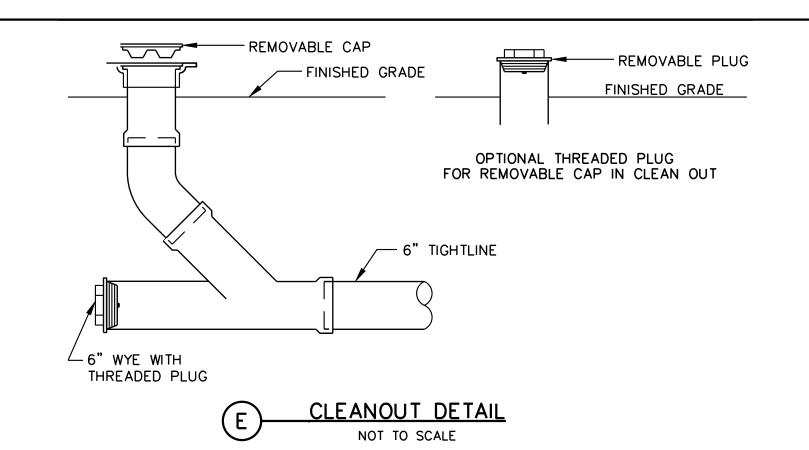
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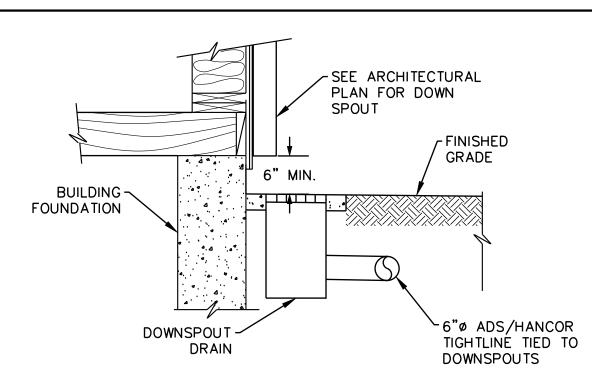


NOTES:

- 1. CATCH BASINS TO BE CONSTRUCTED IN ACCORDANCE WITH ASTM C 478 (AASHTO M 199) AND ASTM C 890, UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN THE STANDARD SPECIFICATIONS.
- 2. AS AN ACCEPTABLE ALTERNATE TO REBAR, WELDED WIRE FABRIC HAVING A MINIMUM AREA OF 0.12 SQUARE INCHES PER FOOT MAY BE USED. WELDED WIRE FABRIC SHALL COMPLY TO ASTM A 497 (AASHTO M 221). WIRE FABRIC SHALL NOT BE PLACED IN THE KNOCKOUTS.
- 3. THE BOTTOM OF THE PRECAST BASE SECTION MAY BE ROUNDED.
- 4. PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2 INCHES MINIMUM. KNOCKOUTS MAY BE ON ALL 4 SIDES EITHER ROUND OR "D" SHAPE. PIPE TO BE INSTALLED IN FACTORY SUPPLIED KNOCKOUTS. KNOCKOUT OR CUTOUT HOLE SIZE IS EQUAL TO PIPE OUTER DIAMETER PLUS CATCH BASIN WALL THICKNESS (20 INCHES MAXIMUM).
- 5. THE MAXIMUM DEPTH FROM THE FINISHED GRADE TO THE PIPE INVERT IS 5 FEET.
- 6. THE TAPER ON THE SIDES OF THE PRECAST BASE SECTION AND RISER SECTION SHALL NOT EXCEED 0.5 INCHES PER FOOT.
- 7. FRAME AND GRATE MAY BE INSTALLED WITH FLANGE DOWN OR CAST INTO RISER.

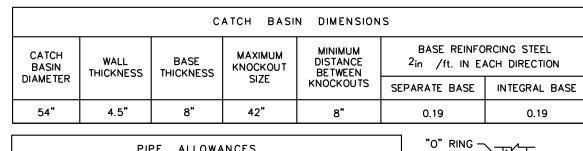






F DOWNSPOUT CONNECTION DETAIL

NOT TO SCALE



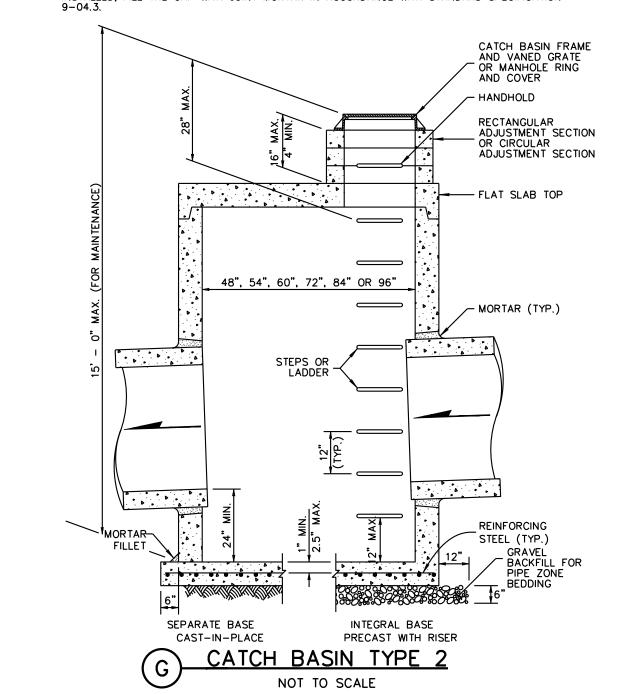
	Р	IPE ALLC	WANCES			"O" RING
CATCH	PIPE MATERIAL WITH MAXIMUM INSIDE DIAMETER			12"		
BASIN DIAMETER	CONCRETE	ALL METAL	CPSSP	SOLID WALL PVC ②	PROFILE WALL PVC ③	6" 1888 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
54"	30"	36"	30"	27"	36"	PIPE ZONE BEDDING

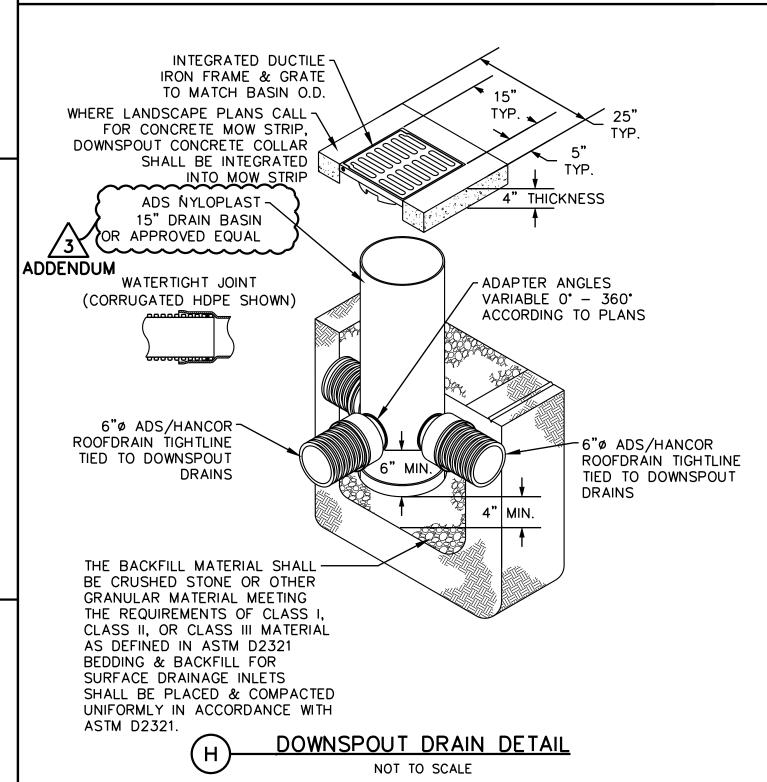
① CORRUGATED POLYETHYLENE STORM SEWER PIPE (STD. SPEC. 9-05.20) ② (STD. SPEC. 9-05.12(1)) ③ (STD. SPEC. 9-05.12(2)) SEPARATE BASE PRECAST

NOTES

1. NO STEPS ARE REQUIRED WHEN HEIGHT IS 4' OR LESS.

- 2. THE BOTTOM OF THE PRECAST CATCH BASIN MAY BE SLOPED TO FACILITATE CLEANING.
 3.
 THE RECTANGULAR FRAME AND GRATE MAY BE INSTALLED WITH THE FLANGE UP OR DOWN.
- KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MINIMUM TO 2.5" MAXIMUM. PROVIDE A 1.5" MINIMUM GAP BETWEEN THE KNOCKOUT WALL AND THE OUTSIDE OF THE PIPE. AFTER THE PIPE IS INSTALLED, FILL THE GAP WITH JOINT MORTAR IN ACCORDANCE WITH STANDARD SPECIFICATION 9-04.3.







ARY SCHOBUILDING

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Revisions Closing Date

ADDENDUM 3 12/12/2016

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Sheet Title

PERMISSION.

DRAINAGE DETAILS



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CE.12

MSGS Project No.
16-111

TRANSFER HOLE AND COVER

FILTRATION BAY

- SEPARATION WALL

INLET BAY -

ALTERNATE PIPE LOCATION

OUTLET BAY -

COVER (TYP OF 2)

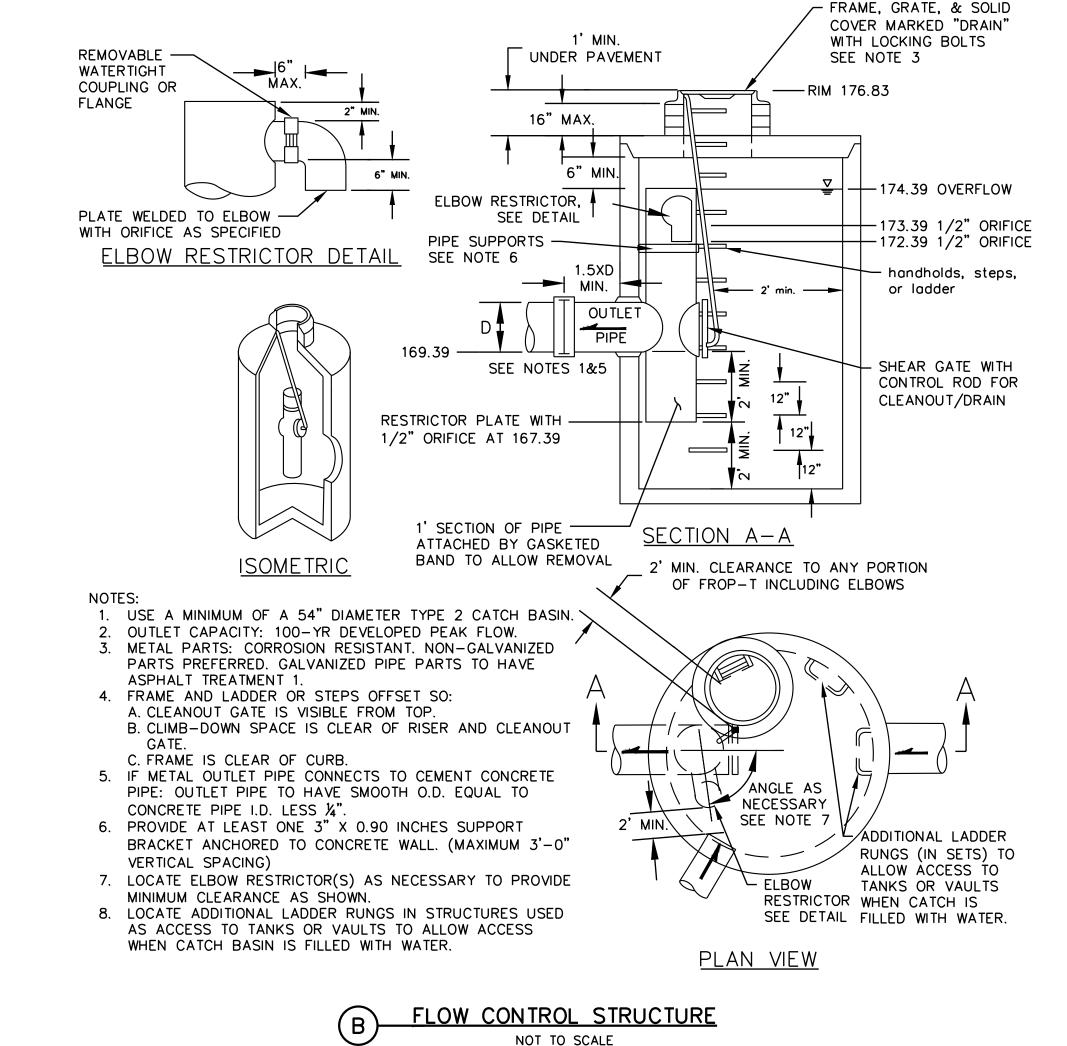
GRADE RINGS/RISERS

INLET PIPE -

WEIR WALL -

STORMFILTER

<u>PLAN</u>



- FRAME LOCKING LID

(MARKED "DRAIN")

MOUNTED OVER 24"

DIAM. ECCENTRIC

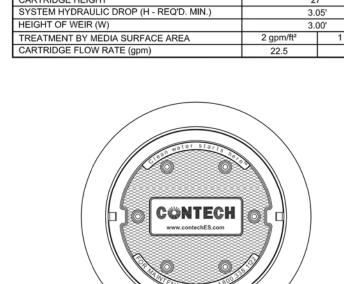
OPENING

STANDARD TYPE

2-60" DIAM. CB

36" CMP RISER

CONCRETE TOP SLAB



FRAME AND COVER

N.T.S.

FLOW RATE. PEAK CONVEYANCE CAPACITY TO BE DETERMINED BY ENGINEER OF RECORD.

• ALL PARTS AND INTERNAL ASSEMBLY PROVIDED BY CONTECH UNLESS OTHERWISE NOTED.

• THE PEAK DIVERSION STORMFILTER IS AVAILABLE IN A LEFT INLET (AS SHOWN) OR RIGHT INLET CONFIGURATION.

SITE SPECIFIC DATA REQUIREMENTS STRUCTURE ID WATER QUALITY FLOW RATE (CFS OR L/s) 0.17 CFS PEAK FLOW RATE (CFS OR L/s) - CFS RETURN PERIOD OF PEAK FLOW (YRS) 100 # OF CARTRIDGES REQUIRED CARTRIDGE FLOW RATE 11.25 GPM MEDIA TYPE (CSF, PERLITE, ZPG, GAC, PHS) ZPG PIPE DATA: DIAMETER INLET PIPE #1 170.16 ADS N-12 18" INLET PIPE #2 OUTLET PIPE 170.59 ADS N-12 12" INLET BAY RIM ELEVATION 177.23 FILTER BAY RIM ELEVATION 177.23 ANTI-FLOTATION BALLAST HEIGHT

NOTES/SPECAIL REQUIREMENTS: PERFORMANCE SPECIFICATION

FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF CLEANING. RADIAL MEDIA **DEPTH SHALL BE 7-INCHES**. FILTER MEDIA CONTACT TIME SHALL BE AT LEAST **37 SECONDS**. SPECIFIC FLOW RATE SHALL BE 2 GPM/SF (MAXIMUM). SPECIFIC FLOW RATE IS THE MEASURE OF THE FLOW (GPM) DIVIDED BY THE MEDIA SURFACE CONTACT AREA (SF). MEDIA VOLUMETRIC FLOW RATE SHALL BE 6 GPM/CF OF MEDIA (MAXIMUM).

STORMFILTER DESIGN TABLE

• THE 8' x 6' PEAK DIVERSION STORMFILTER TREATMENT CAPACITY VARIES BY CARTRIDGE COUNT AND LOCALLY APPROVED SURFACE AREA SPECIFIC

- GENERAL NOTES

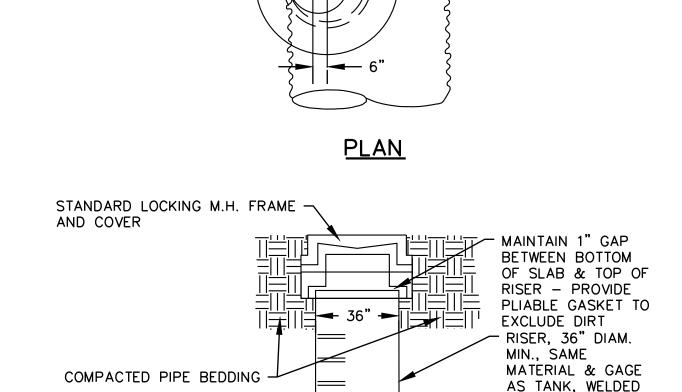
 1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE. 2. DIMENSIONS MARKED WITH () ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY. 3. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH
- 4. STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT. 5. STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING. ASSUMING EARTH COVER OF 0' - 5' AND GROUNDWATER ELEVATION AT. OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
- INSTALLATION NOTES

 A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD. B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER

C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH OUTLET PIPE INVERT WITH OUTLET BAY FLOOR. F. CONTRACTOR TO REMOVE THE TRANSFER HOLE COVER WHEN THE SYSTEM IS BROUGHT ONLINE.

CNTECH ENGINEERED SOLUTIONS LLC www.ContechES.com 25 Centre Pointe Dr., Suite 400, West Chester, OH 45069

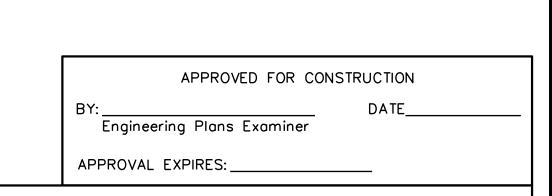
THE STORMWATER MANAGEMENT STORMFILTER 8' x 6' PEAK DIVERSION STORMFILTER STANDARD DETAIL



AS TANK, WELDED OR FUSED TO PIPE M.H. STEPS 12" O.C. WELD OR BOLT STANDARD M.H ²⁴" MAX. **SECTION**

> 1. USE ADJUSTING BLOCKS AS REQUIRED TO BRING FRAME TO GRADE. 2. ALL MATERIALS TO BE ALUMINUM OR GALVANIZED AND ASPHALT

COATED (TREATMENT 1 OR BETTER). 3. MUST BE LOCATED FOR ACCESS BY MAINTENANCE VEHICLES. 4. MAY SUBSTITUTE WSDOT SPECIAL TYPE IV MANHOLE (RCP ONLY)



THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT 1-800-424-5555

A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR MAINTAINING ALL LOCATE MARKS ONCE THE UTILITIES HAVE BEEN LOCATED.

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Revisions	Closing Date

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DRAINAGE DETAILS

16-111

WATER NOTES:

N: 637371.10 E: 1046394.19 CONNECT TO EXISTING 8"WATER MAIN; CONTRACTOR TO FIELD VERIFY PIPE LOCATION, DEPTH, MATERIAL, SIZE, PRIOR TO ORDERING MATERIALS; INSTALL 8" TEE (FL) PER CITY OF OLYMPIA DETAIL 6-11 8" GATE VALVE (FL×MJ) THRUST BLOCKING SEE DETAILS ON SHEET CE.15

INSTALL 56 LF 8" AWWA C151 CL 50 DUCTILE IRON TRENCH RESTORATION SHALL BE PER CITY OF OLYMPIA STANDARD DRAWINGS 4-8, 4-8A & 4-8C ON SHEET CE.10

E: 1046338.51 INSTALL 8"x6" TEE (FL) 8" FLxMJ ADAPTER 6" GATE VALVE (FL×MJ) 8"x6" REDUCER (FL) 6"x4" TEE (FL) 6" POST INDICATOR VALVE (FLxMJ) TAMPER SWITCH PER ELECTRICAL/MECHANICAL PLANS 4" GATE VALVE (FL) 4" BLIND FLANGE TAPPED 3" NPT FITTINGS AND ADAPTERS AS REQUIRED THRUST BLOCKING SEE DETAILS ON SHEET CE.15

108 LF 6" AWWA C151 CL 52 DUCTILE IRON SEE TRENCH RESTORATION DETAIL ON SHEET CE.10

N: 637376.99 E: 1046226.51 INSTALL 6" 90° BEND (MJ) (2) 6" RESTRAINING GLANDS THRUST BLOCKING SEE DETAILS ON SHEET CE.15

INSTALL 14 LF 6" AWWA C151 CL 52 DUCTILE IRON SEE TRENCH RESTORATION DETAIL ON SHEET CE.10

CONNECT TO BUILDING FIRE PROTECTION PIPING PER MECHANICAL PLANS

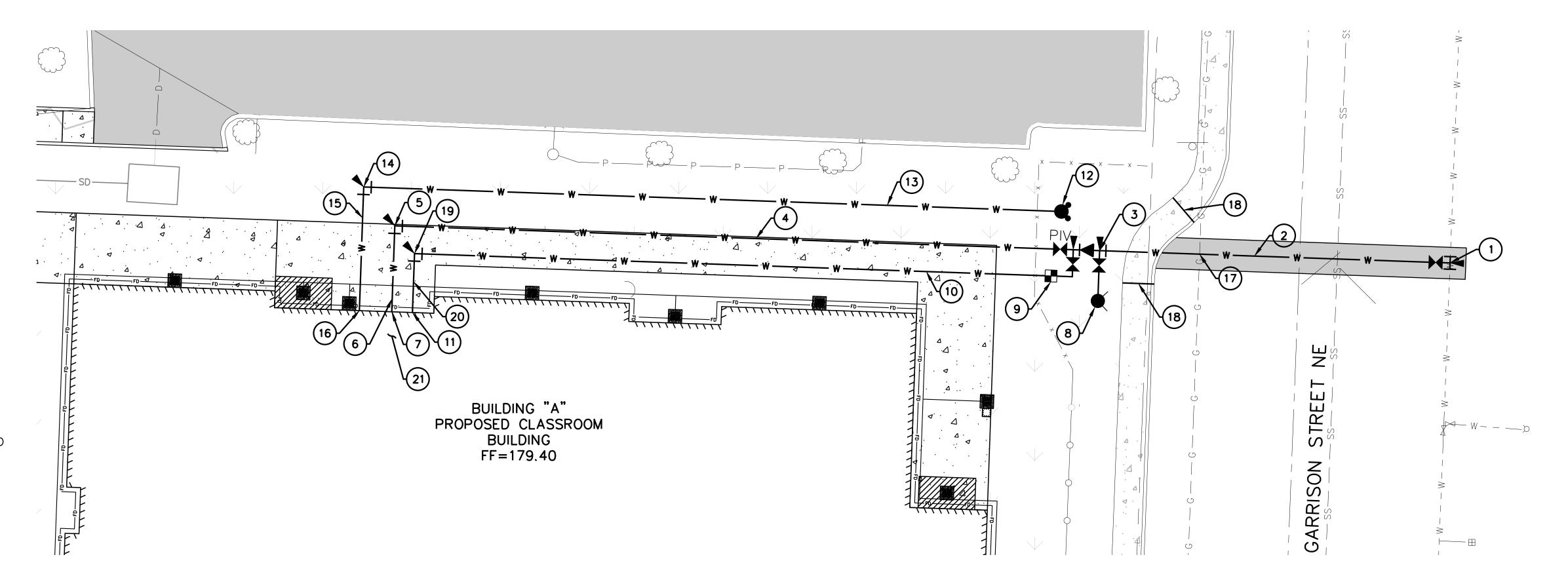
N: 637365.07 E: 1046338.23 INSTALL FIRE HYDRANT ASSEMBLY PER CITY OF OLYMPIA DETAIL 6-8 THRUST BLOCKING SEE DETAILS ON SHEET CE.15

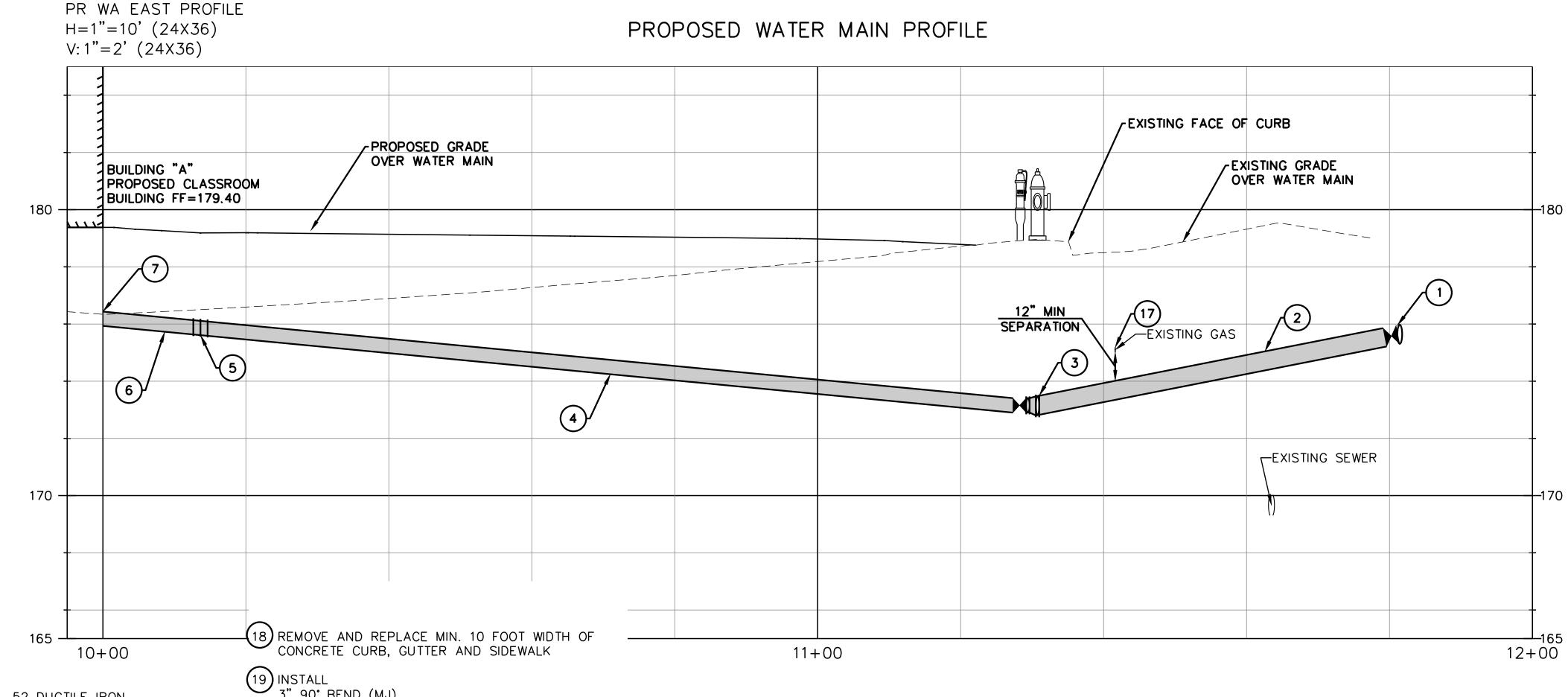
INSTALL 2" WATER METER PER CITY OF OLYMPIA DETAIL 6-3 FITTINGS AND ADAPTERS AS REQUIRED SEE DETAILS ON SHEET CE.15

101 LF 3" AWWA C151 CL51 DUCTILE IRON SEE TRENCH RESTORATION DETAIL ON SHEET CE.10

CONNECT TO BUILDING WATER SUPPLY PER MECHANICAL PLANS; FITTINGS AND ADAPTERS AS REQUIRED

N: 637379.28 E: 1046332.44 FIRE DEPARTMENT CONNECTION PER DETAIL ON SHEET CE.15 THRUST BLOCKING





111 LF 4" AWWA C151 CL 52 DUCTILE IRON SEE TRENCH RESTORATION DETAIL ON SHEET CE.10

3" 90° BEND (MJ)

THRUST BLOCKING

SEE DETAILS ON SHEET CE.15

10 LF 3" AWWA C151 CL51 DUCTILE IRON

21) DOUBLE CHECK VALVE ASSEMBLIES LOCATED IN

MECHANICAL ROOM, SEE MECHANICAL PLANS

SEE TRENCH RESTORATION DETAIL ON SHEET CE.10

Engineering Plans Examiner

APPROVAL EXPIRES: _____

E: 1046221.57 INSTALL 4" 90° BEND (MJ) (2) 4" RESTRAINING GLANDS THRUST BLOCKING SEE DETAILS ON SHEET CE.15

(15) INSTALL 20 LF 4" AWWA C151 CL 52 DUCTILE IRON SEE TRENCH RESTORATION DETAIL ON SHEET CE.10

CONNECT TO BUILDING FIRE DEPARTMENT CONNECTION PIPING PER MECHANICAL PLANS

FIELD VERIFY LOCATION OF EXISTING GAS LINE PRIOR TO ORDERING MATERIALS

TRENCH RESTORATION OF ALL NEW UTILITY TRENCHING, EXCEPT WITHIN THE CITY OF OLYMPIA ROW, SHALL BE PER DETAIL ON SHEET CE.10; UTILITY TRENCHING WITHIN THE CITY OF OLYMPIA ROW SHALL CONFORM TO CITY OF OLYMPIA CURRENT EDDS STANDARDS. RESTORE AREAS AS SHOWN ON CIVIL AND LANDSCAPE PLANES

THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO APPROVED FOR CONSTRUCTION CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT

1-800-424-5555 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR MAINTAINING ALL LOCATE MARKS ONCE THE UTILITIES HAVE BEEN LOCATED.

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ISSUE: BID SET NOVEMBER 28, 2016

Revisions	Closing Date
ADDENDUM 3	12/12/2016

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WATER PLAN & PROFILE

4. THE CONTRACTOR WILL PROVIDE TRAFFIC CONTROL PLAN(S) AS REQUIRED IN ACCORDANCE WITH THE CURRENT WSDOT SPECIFICATIONS AND MUTCD.

5. ALL WATER MAINS WILL BE STAKED FOR GRADES AND ALIGNMENT BY AN ENGINEERING OR SURVEYING FIRM CAPABLE OF PERFORMING SUCH WORK. STAKING WILL BE MAINTAINED THROUGHOUT CONSTRUCTION.

ALL WATER SYSTEM CONNECTIONS TO SERVE BUILDINGS OR PROPERTIES WITH DOMESTIC POTABLE WATER, FIRE SPRINKLER SYSTEMS, OR IRRIGATION SYSTEMS WILL COMPLY WITH THE MINIMUM BACKFLOW PREVENTION REQUIREMENTS AS ESTABLISHED BY THE WASHINGTON STATE DEPARTMENT OF HEALTH AND THE CITY OF OLYMPIA IN ITS CROSS CONNECTION PROGRAM.

CALL UNDERGROUND LOCATE AT 1-800-424-5555 A MINIMUM OF 2 BUSINESS DAYS BEFORE COMMENCING ANY EXCAVATION. UNDERGROUND UTILITY LOCATES WILL BE PREFORMED ONCE. IT IS THE RESPONSIBILITY OF THE REQUESTOR TO MAINTAIN THE MARKINGS AFTER THE INITIAL LOCATE IN ACCORDANCE WITH RCW 19.122.

THE CITY REQUIRES 10 WORKING DAYS WRITTEN NOTICE FOLLOWING APPLICATION AT THE COMMUNITY PLANNING AND DEVELOPMENT DEPARTMENT TO SCHEDULE SHUTDOWNS. THE WRITTEN NOTICE WILL BE COORDINATED WITH THE CITY INSPECTOR. THE CITY OF OLYMPIA DRINKING WATER OPERATIONS OR CITY INSPECTOR WILL PERFORM THE SHUTDOWN.

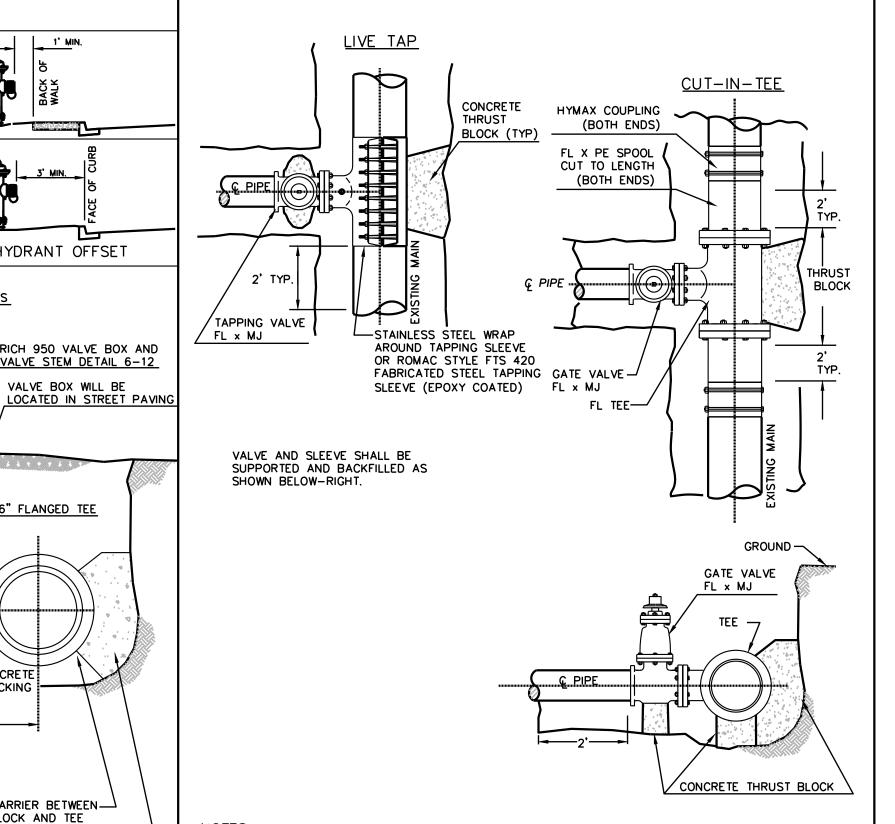
AT ANY CONNECTION TO AN EXISTING LINE WHERE A NEW VALVE IS NOT INSTALLED. THE EXISTING VALVE MUST BE PRESSURE TESTED TO CITY STANDARDS BY THE CONTRACTOR PRIOR TO CONNECTION. IF AN EXISTING VALVE FAILS TO PASS THE TEST, THE CONTRACTOR WILL MAKE THE NECESSARY PROVISIONS TO TEST THE NEW LINE PRIOR TO CONNECTION TO THE EXISTING SYSTEM OR INSTALL A NEW VALVE.

10. AT ANY WATER MAIN TAP TO EXISTING CITY MAINS WHERE THE CONTRACTOR ENCOUNTERS A COUPLING OR EXISTING ASSEMBLIES, THE CONTRACTOR WILL PROVIDE A MINIMUM OF 18 INCHES OF CLEARANCE FROM COUPLING OR ASSEMBLIES TO EDGE OF TAPPING SLEEVE.

11. ANY WATER MAIN TAP OR CONNECTION WILL BE BLOCKED ACCORDING TO THE CITY OF OLYMPIA STANDARD PLANS.

12. ANY EXCAVATION THAT EXPOSES AN ASBESTOS CEMENT WATER MAIN OR THE CITY 36 INCH WATER TRANSMISSION MAIN SHALL BE BEDDED WITH CONTROLLED DENSITY FILL (CDF) PURSUANT TO THE WSDOT SPECIFICATIONS FOR CDF. AS AN OPTION THE CONTRACTOR MAY CHOOSE TO REPLACE THE ASBESTOS PIPE AT ANY CROSSING WITH DUCTILE IRON PIPE BENCHED INTO BOTH TRENCH WALLS. THE CONTRACTOR WILL COORDINATE WITH THE CITY INSPECTOR TO HAVE A CITY OF OLYMPIA DRINKING WATER OPERATIONS STAFF MEMBER ON SITE BEFORE CONSTRUCTION BEGINS.

13. BEFORE CUTTING OR REMOVING ANY EXISTING ASBESTOS PIPE THE CONTRACTOR WILL SUPPLY THE CITY OF OLYMPIA INSPECTOR A COPY OF THE WORKMAN'S CERTIFICATIONS TO WORK WITH ASBESTOS PIPE. THE CONTRACTOR WILL CONFORM TO ALL REGULATIONS AND GUIDANCE RELATED TO ASBESTOS WORK PROVIDED BY THE OLYMPIC REGION CLEAN AIR AGENCY.



NOTES:

1. HYDRANTS SHALL BE LOCATED WITH A MINIMUM THREE

IS REQUIRED ON ALL SIDES OF THE HYDRANT.

LOCATED IN SIDEWALK.

MEDALLION OR AVK.

FIELD PAINT

HYDRANT PARKER

PAINT MARATHON

FNAMFI SAFFTY

REMOVE

VARIES

MATCH

TRENCH

APPROVED BY

FRAN R. EIDE, PE

CITY ENGINEER

TOP VIEW

SIDE VIEW

TEE

TEE WITH

PLUG

VERTICAL BEND

APPROVED BY

FRAN R. EIDE, PE

CITY ENGINEER

16"-24" DIAMETER WITH 36" IMBEDMENT.

REVISED DATE

9/1/2013

PORT CHAINS -

YELLOW EXCEPT FOR THE AVK

FOOT RADIUS UNOBSTRUCTED WORKING AREA PROVIDED AROUND ALL HYDRANTS, AND IN NO CASE SHALL BE

WHEN R/W IS NOT ADEQUATE, A MINIMUM 5' EASEMENT

HYDRANT SHALL BE DRESSER M&H RELIANT STYLE 929,

TOP VIEW OPERATING NUT

1/2" HOSE CONNECTION WITH NST THREADS

4" PUMPER PORT CONNECTION

5" STORZ ADAPTER STYLE

5-37 W/SC CAP

EACH PIPE JOINT 6" #1106

6" CLASS 50 DUCTILE IRON

6" GATE VALVE, FL X MJ—

√

CITY OF OLYMPIA

SIDE VIEW

CROSS WITH

PLUGS

IF IN THE OPINION OF THE CITY ENGINEER THE VALVE IS ON

CITY OF OLYMPIA

STANDARD BLOCKING DETAIL

A SLOPE AND/OR THE COVER ON THE PIPE WOULD APPLY

UPWARD THRUST, THEN THRUST BLOCKING WILL BE REQUIRED.

GATE VALVE

HYDRANT ASSEMBLY

VARIES / 50' MAXIMUM

EBAA IRON, INC. MEGALUG

HYDRANT OFFSET

RICH 950 VALVE BOX AND

VALVE STEM DETAIL 6-12

VALVE BOX WILL BE

" FLANGED TEE

BLOCKING

PLASTIC BARRIER BETWEEN— THRUST BLOCK AND TEE

CONCRETE THRUST BLOCK -

FITTING ONLY SEE STANDARD

STD. DWG. NO

6-8

WYE

HORIZ. BEND

PLUG OR CAP

STD. DWG. NO.

6-14

APPROVED BY

CITY ENGINEER

RAN R. EIDE, PE

REVISED DATE

DRAWINGS 6-14 AND 6-15

CAST-IN-PLACE AGAINST

EATHER SHIELD

18"-24"

STANDPIPE

└─4"X8"X16" CONCRETE BLOCK

BACKFILL TO TOP OF DRAIN RING HOUSING

6' X 6' CONSTRUCTION FABRIC, COVERING A SIX

CUBIC FOOT ENVELOPE OF 2" WASHED ROCK

REVISED DATE

9/1/2015

TOP! VIEW

CROSS

CROSS WITH

PLUG

CONCRETE THRUST BLOCKING TO BE POURED AGAINST UNDISTURBED EARTH.

4. PLUGS TO BE MINIMUM OF 5' FROM TEE, WYE, CROSS ON VALVE.

2. PLASTIC BARRIER SHALL BE PLACED BETWEEN ALL THRUST BLOCKS & FITTINGS.

3. ANCHOR REBAR SHALL BE #5 ON 12" DIA. AND LESS WITH 30" IMBEDMENT, #5 ON

BOLTS WITH 2" WASHED ROCK AS SHOWN

HYDRANT SHOE

WATEROUS PACER 250, MUELLER CENTURION, CLOW

1. ALL SERVICE SADDLES SHALL HAVE

2. SETTERS SHALL BE CENTERED IN

1/2"-2" C.T.S. 200 PSI

RESILIENT SEAT

TAIL IN BOX

COMPRESSION

2" RESILIENT SEAT

CONNECTED TO SADDLE OR MECHANICALLY

GATE VALVE 14 GAUGE COATED BLUE TONING WIRE

WRAPPED AROUND THE PIPE AND

REVISED DATE

9/1/2015

LOOP AT TOP MUST EXTEND A MIN OF 3 FT. ABOVE FINISHED GRADE.

<u>1" DRILLED HOLE</u>

VALVE OPERATING NUT OR 1 7/8" X 1 7/8" X 2" HIGH GRADE STEEL WELDED TO

2"X2"X 3/16" SQUARE STRUCTURAL STEEL TUBING TO FIT OPERATING NUT. LENGTH

CITY OF OLYMPIA

STANDARD VALVE BOX

I. ALL WELDS TO SHAFT SHALL BE FILLET WELD ALL AROUND, AS SPECIFIED ABOVE.

3/16" THICK X 5 1/5" DIA STEEL GUIDE PLATE WELDED TO RISER SHAFT.

-SERVICE SADDLE

APPROVED BY

FRAN R. EIDE, PE

CITY ENGINEER

S" OF CL 'B' CONCRETE (TYP)

<u>OUTSIDE PAVED AREA</u>

DRILL "1" HOLE AS NOTED. PULL WIRE THROUGH TO

INSIDE OF CAN AND PULL

CONTINUOUS SIGNAL FOR THE LENGHT OF MAIN.

0.67' BALLAST_

AS REQUIRED.

APPROVED BY

FRAN R. EIDE, PE

CITY ENGINEER

0.5' CONCRETE CL 'B'-

INSIDE PAVED ROADWAY

VALVE STEM EXTENSION LEGEND

REVISED DATE

9/1/2015

-SEAL JOINTS WITH AR4000W

0.17' HMA

0.17' CSTC

THROUGH. TRACER WIRE

MUST SUPPLY

BONDED TO EXISTING WIRE ON MAIN

FROM TOP

GRIP JOINT. PACK JOINT MUELLER 110

SEE VALVE BOX DETAIL 6-

GATE VALVE

POLYETHYLENE LINE

-4

 $^{
m J}$ DOUBLE STAINLESS

SERVICE SADDLE

VALVE BOX AND STEM DETAIL

(SEE 6-12)

STEEL STRAP

METER BOXES.

RUBBER GASKET AND I.P. THREADS.

3. STAINLESS STEEL INSERTS REQUIRED FOR

BALL VALVE STYLE SETTER

2% SLOPE TO BOX

2"x 1 1/2" BUSHING FOR 1 1/2"

1 1/2"-2" C.T.S. POLYETHYLENE LINE

(USE 200 PSI GRADE PE 3408)

ALL PACK JOINTS, OR GRIP JOINTS.

4. METER BOX SHALL BE HDPE MID-STATES

WITH MID-STATES CBC-1730-R DUCTILE

BCF1730-18 OR APPROVED EQUAL,

IRON COVER OR APPROVED EQUAL.

-SIDE BYPASS

M IPS THREADS

-1/4 TURN BRASS BALL VALVE

17 1/4" 12'

RICH-950 VALVE BOX WITH "CITY OF OLYMPIA" WATER CAST IN LID.

FINISHED GRADE

6" SDR 35 PVC WATER

CENTERED OVER VALVE

VALVE STEM RISER

TRENCH BOTTOM

STD. DWG. NO.

6-12

-GATE VALVE SHOWN-SIMILAR

INSTALLATION REQUIRED FOR

BUTTERFLY VALVES.

(LENGTH VARIES)

IF NEEDED

PIPE CONFORMING TO ASTM 3034. RISER PIPE

TO BE PLUMB AND

STD. DWG. NO.

BRASS STREET 90

PACK JOINT

MUELLER 110

T COMPRESSION

1 1/2" 13 1/4"

CITY STANDARD FOR COPPER SETTERS ARE:

2" VBB77-12HB-11-77

CITY OF OLYMPIA

1-1/2" & 2" STANDARD

SETTER WITH BYPASS

1 1/2" VBB76-12HB-11-77

12" 1 1/2-2"

BRASS NIPPLE

28.75"

VALVE

1. 11 MIL PLASTIC OR CONSTRUCTION FABRIC SHALL BE WRAPPED AROUND PIPE AND FITTINGS BEFORE THRUST BLOCKS ARE POURED. 2. SUPPORT VALVE AND SLEEVE CONTINUOUSLY THROUGH INSTALLATION.

CITY OF OLYMPIA

CONNECTION TO EXISTING MAIN

STD. DWG. NO.

6-11

THRUST LOADS THRUST AT FITTINGS IN POUNDS AT 200 POUNDS PER SQUARE INCH OF WATER PRESSURE					
PIPE DIAMETER	90° BEND	45° BEND	22-1/2° BEND	11-1/4° BEND	DEAD END OR TEE
4"	3,600	2,000	1,000	500	2,600
6"	8,000	4,400	2,300	1,200	5,700
8"	14,300	7,700	4,000	2,000	10,100
10"	22,300	12,100	6,200	3,100	15,800
12"	32,000	17,400	8,900	4,500	22,700

43,600 23,600 12,100 6,100 30,800 57,000 30,800 15,700 7,900 40,300

BLOCKING SHALL BE CEMENT CONCRETE CLASS "B" POURED IN PLACE AGAINST UNDISTURBED EARTH, FITTING SHALL BE ISOLATED FROM CONCRETE THRUST BLOCK WITH PLASTIC OR SIMILAR MATERIAL.

2. TO DETERMINE THE BEARING AREA OF THE THRUST BLOCK IN SQUARE FEET (SF) EXAMPLE: 12" - 90° BEND IN SAND AND GRAVEL

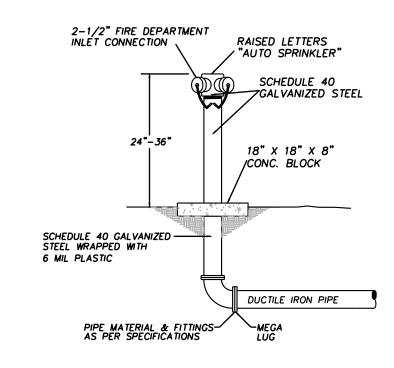
 $32,000 \text{ LBS} \div 3000 \text{ LB/SF} = 10.7 \text{ SF OF AREA}$ AREAS MUST BE ADJUSTED FOR OTHER PIPE SIZE, PRESSURES AND SOIL CONDITIONS. BLOCKING SHALL BE ADEQUATE TO WITHSTAND FULL TEST PRESSURE AS WELL AS TO CONTINUOUSLY WITHSTAND OPERATING PRESSURE UNDER ALL CONDITIONS OF SERVICE.

SAFE SOIL BEARING LOADS

FOR HORIZONTAL THRUSTS WHEN THE DEPTH OF COVER OVER THE PIPE EXCEEDS 2 FEET

SOIL	POUNDS PER SQUARE FOOT
MUCK, PEAT	0
SOFT CLAY	1,000
SAND	2,000
SAND & GRAVEL	3,000
SAND & GRAVEL CEMENTED WITH CLAY	4,000
HARD SHALE	10,000

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APPROVED BY	REVISED DATE	CITY OF OLYMPIA	STD. DWG. NO.
FRAN R. EIDE, PE	9/1/2015	THRUST LOADS	6-15
CITY ENGINEER	0, 1, 2010		



POST INDICATOR VALVE

FIRE DEPARTMENT CONNECTION

A. PIPES TO BUILDING SHALL BE CLASS 52 DI B. TAMPER SWITCHES SHALL BE INSTALLED ON POST INDICATOR VALVE AND CONNECTED TO BUILDING FIRE ALARM SYSTEM. SEE MECHANICAL/ELECTRICAL PLANS. CONTRACTOR TO COORDINATE FOR A COMPLETE AND OPERATIONAL SYSTEM.

INSTALL PLUGS ON ALL TEST COCKS. FINGER TIGHTEN. ALL PIPING SHALL BE PER NFPA13. FIRE SERVICES REQUIRE DETECTOR TYPE BACKFLOW PROTECTION ASSEMBLIES.

POST INDICATOR VALVE & FIRE DEPARTMENT CONNECTION NOT TO SCALE

APPROVED FOR CONSTRUCTION Engineering Plans Examiner

APPROVAL EXPIRES:

THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT 1-800-424-5555

A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR MAINTAINING ALL LOCATE MARKS ONCE THE UTILITIES HAVE BEEN LOCATED.

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าร	Closing Date

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Sheet Title

WATER DETAILS & NOTES

10 + 20

10+00

9+90

10 + 40

10+60

10+80

THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT

11+60

TRENCH RESTORATION SHALL BE

PER DETAIL ON SHEET CE.08

VERTICAL DATUM

THURSTON COUNTY MON. "209"

NAVD88

<u>NOTES</u>

SEWER NOTES:

SEWER CLEAN OUT

21 LF 6" ASTM D 3034 PVC SEWER PIPE AND TRACER WIRE.

SEWER CLEAN OUT

150 LF 6" ASTM D 3034 PVC SEWER PIPE AND TRACER WIRE.

CONNECT TO EXISTING SEWER LINE PER CITY OF OLYMPIA STANDARD DETAIL 7-19. CONTRACTOR SHALL FIELD VERIFY

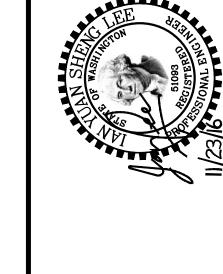
6 CONNECT TO BUILDING SEWER LINE PER MECHANICAL PLANS

TRENCH RESTORATION SHALL BE PER CITY OF OLYMPIA STANDARD DRAWINGS 4-8, 4-8A & 4-8C ON SHEET CE.10

ADDENDUM

ADDENDUM

TRENCH RESTORATION OF ALL NEW UTILITY TRENCHING, EXCEPT WITHIN THE CITY OF OLYMPIA ROW, SHALL BE PER DETAIL ON SHEET CE.10; UTILITY TRENCHING WITHIN THE CITY OF OLYMPIA ROW SHALL CONFORM TO CITY OF OLYMPIA CURRENT EDDS STANDARDS. RESTORE AREAS TO MATCH EXISTING CONDITIONS OR



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SEWER PLAN & PROFILE

MSGS Project No. 16-111

APPROVED FOR CONSTRUCTION Engineering Plans Examiner APPROVAL EXPIRES: _____

11 + 20

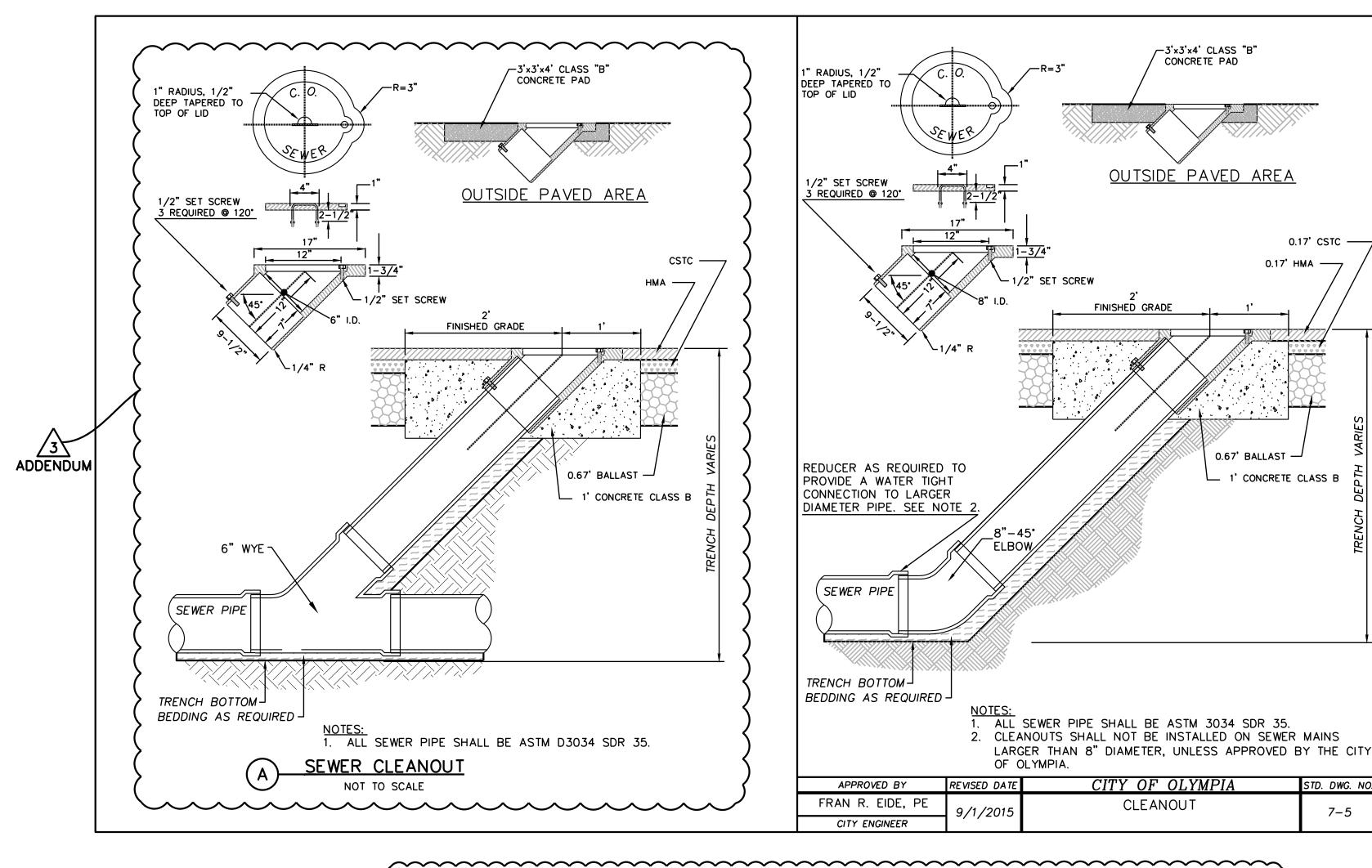
1-800-424-5555 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR MAINTAINING ALL LOCATE MARKS ONCE THE UTILITIES HAVE BEEN LOCATED.

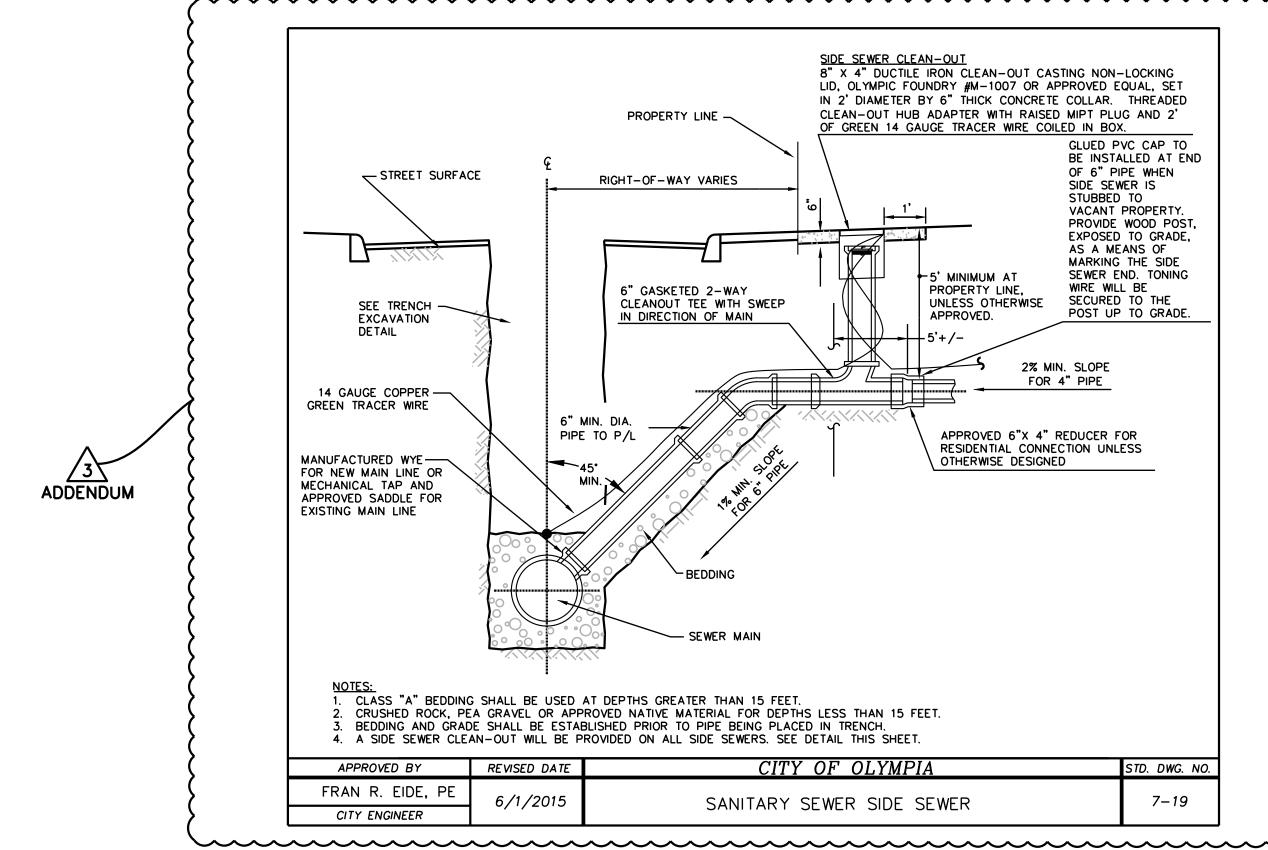
11 + 40

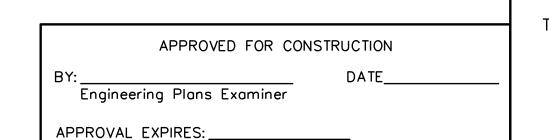
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SANITARY SEWER CONSTRUCTION:

- 1. IF CONSTRUCTION IS TO TAKE PLACE IN THE COUNTY RIGHT-OF-WAY, THE CONTRACTOR SHALL NOTIFY THE COUNTY AND OBTAIN ALL THE REQUIRED APPROVALS AND PERMITS
- 2. THE CITY OF OLYMPIA CONSTRUCTION INSPECTOR SHALL BE NOTIFIED A MINIMUM OF 48 HOURS (TWO WORKING DAYS) IN ADVANCE OF A TAP CONNECTION TO AN EXISTING MAIN. THE INSPECTOR SHALL BE PRESENT AT THE TIME OF THE TAP.
- 3. ALL SEWER MAINS SHALL BE FIELD STAKED FOR GRADES AND ALIGNMENT BY A LICENSED ENGINEERING OR SURVEYING FIRM QUALIFIED TO PERFORM SUCH WORK. STAKING SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
- 4. WHEN TEMPORARY STREET PATCHES ARE ALLOWED BY THE CITY, COLD MIX ASPHALT SHALL BE PLACED AND COMPACTED TO A MAXIMUM DEPTH OF 2 INCHES. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AS REQUIRED BY THE CITY.
- 5. AFTER BACKFILLING, BUT PRIOR TO PAVING, ALL MAINS AND APPURTENANCES SHALL BE INSPECTED AND APPROVED BY THE CITY OF OLYMPIA CONSTRUCTION INSPECTOR. APPROVAL DOES NOT CONSTITUTE FINAL ACCEPTANCE OF THE SEWER LINE. THE CONTRACTOR SHALL RETAIN THE RESPONSIBILITY TO REPAIR ALL DEFICIENCIES AND FAILURES REVEALED DURING ALL REQUIRED TESTING FOR ACCEPTANCE AND THROUGH THE DURATION OF THE WARRANTY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY OF OLYMPIA FOR THE REQUIRED INSPECTIONS. ANY MAIN OR APPURTENANCE BACKFILLED PRIOR TO INSPECTION SHALL BE RE-EXCAVATED FOR INSPECTION.
- 6. ALL LINES WILL BE HIGH-VELOCITY CLEANED AND SUBJECTED TO A LOW-PRESSURE AIR TEST PURSUANT TO CURRENT WSDOT/APWA SPECIFICATIONS AFTER BACKFILLING, BUT PRIOR TO PAVING (SEE GENERAL NOTE 1). HYDRANT FLUSHING OF LINES IS NOT AN ACCEPTABLE CLEANING METHOD.
- 7. TESTING OF THE SANITARY SEWER MAIN WILL INCLUDE TELEVISION INSPECTION AT THE CONTRACTOR'S EXPENSE. ADDITIONAL TEVLEVISING THAT IS DEEMED NECESSARY WILL ALSO BE AT THE CONTRACTOR'S EXPENSE. ALL TELEVISION INSPECTIONS SHALL BE COMPLETED IN THE MANNER REQUIRED BY THE PACP. IMMEDIATELY PRIOR TO TELEVISION INSPECTION, ENOUGH WATER WILL BE RUN DOWN THE LINE SO IT COMES OUT THE LOWER MANHOLE AND THE LINE IS FLUSHED CLEAN. ACCEPTANCE OF THE LINE WILL BE MADE AFTER THE TELEVISION INSPECTION TAPE HAS BEEN REVIEWED AND APPROVED BY THE INSPECTOR.
- 8. A TEST OF ALL MANHOLES IN ACCORDANCE WITH OLYMPIA STANDARD IS ALSO REQUIRED. TESTING WILL TAKE PLACE AFTER ALL UNDERGROUND UTILITIES ARE INSTALLED AND COMPACTION OF THE ROADWAY SUBGRADE IS COMPLETED.







THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT 1-800-424-5555

A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR MAINTAINING ALL LOCATE MARKS ONCE THE UTILITIES HAVE BEEN LOCATED.



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