

WHATCOM COUNTY FIRE DISTRICT #7

THORNTON/CHURCH SHORT PLAT - UTILITY SERVICES

GENERAL REQUIREMENTS:

1. ALL WORK AND MATERIALS SHALL CONFORM TO THESE PLANS AND TO THE REQUIREMENTS OF THE CURRENT EDITION OF THE "STATE OF WASHINGTON, DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, AND ITS AMENDMENTS" (WSDOT SPECS.) AND STANDARD PLANS, THE CITY OF FERDALE DEVELOPMENT STANDARDS (COFDS) AND THE 2005 VERSION OF THE DEPARTMENT OF ECOLOGY STORM WATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON (DOE MANUAL). IN CASE OF A CONFLICT BETWEEN PLANS, REGULATORY STANDARDS OR SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT WILL PREVAIL.

2. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER CONSTRUCTION DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES. THROUGHOUT THE PERIOD OF CONSTRUCTION, CONTRACTOR SHALL COMPLY WITH THE TERMS OF ALL PERMITS.

3. THE CONTRACTOR MUST HAVE A FULL SET OF CITY CONTRACT DOCUMENTS ON THE SITE WHENEVER CONSTRUCTION IS IN PROGRESS.

4. CONSTRUCTION NOISE SHALL BE LIMITED TO BETWEEN 7 a.m. TO 8 p.m., MONDAY THROUGH SATURDAY.

5. THE CONTRACTOR SHALL CONTACT THE UTILITIES UNDERGROUND LOCATION CENTER AT LEAST 72 HOURS PRIOR TO STARTING CONSTRUCTION. PHONE: 1-800-424-5555. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL OF THE VARIOUS UTILITY COMPANIES TO ARRANGE FOR FIELD LOCATIONS OF ALL EXISTING UTILITY FACILITIES. NO EXTRA COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR COSTS INCURRED BECAUSE OF DAMAGE DONE TO EXISTING FACILITIES BY THE CONTRACTOR'S WORK FORCE, INCLUDING COSTS FOR REPAIRS, WHICH WILL BE CONTRACTOR'S SOLE RESPONSIBILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF ALL EXISTING UTILITIES AND TO NOTIFY THE PROJECT ENGINEER OF RECORD (ENGINEER) PROMPTLY OF ANY CONFLICT BETWEEN THE APPROVED PLANS AND THE LOCATION OF ANY EXISTING UTILITIES.

6. THE CONTRACTOR SHALL PROTECT ALL PRIVATE AND PUBLIC UTILITIES FROM DAMAGE RESULTING FROM THE WORK. CONTRACTOR SHALL RESTORE ALL PRIVATE AND PUBLIC PROPERTY DISRUPTED BY THE PROJECT IMMEDIATELY AFTER CONSTRUCTION.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EROSION CONTROL MEASURES THROUGHOUT THE DURATION OF THE PROJECT. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY CLEARING OR GRADING IN CONFORMANCE WITH THE EROSION & SEDIMENTATION CONTROL PLAN AND THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP). THE SWPPP SHALL BE ON-SITE AT ALL TIMES DURING CONSTRUCTION ACTIVITIES.

8. SITE CLEARING SHALL INCLUDE THE LOCATION AND REMOVAL OF ALL ABOVE GROUND AND BURIED DEBRIS AND WASTE THAT MAY BE PRESENT.

9. THE CONTRACTOR SHALL OBTAIN REVOCABLE ENCROACHMENT PERMITS FROM THE CITY OF FERDALE AND/OR WHATCOM COUNTY PRIOR TO COMMENCING WORK WITHIN THE PUBLIC RIGHT-OF-WAY.

10. THE CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION MEETING WITH REPRESENTATIVES OF THE CITY OF FERDALE PUBLIC WORKS DEPARTMENT AND THE ENGINEER A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION. THE CITY WILL SCHEDULE THE MEETING.

11. ALL WORK AND MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE CITY OF FERDALE PUBLIC WORKS DEPARTMENT, REPRESENTATIVES FROM THE CITY OF FERDALE PUBLIC WORKS DEPARTMENT MUST INSPECT ALL WORK IDENTIFIED ON THE PLANS, BOTH PUBLIC AND PRIVATE. THE CONTRACTOR SHALL CALL AT LEAST 24 HOURS IN ADVANCE TO SCHEDULE INSPECTIONS AS FOLLOWS:

- PLACEMENT OF TEMPORARY EROSION CONTROL MEASURES.
- CONSTRUCTION OF STORMWATER MANAGEMENT FACILITIES.
- CONSTRUCTION OF WATER MAIN AND BACKFILLING OF WATER MAIN TRENCH WITHIN ROAD RIGHTS OF WAY OR IN WATERLINE EASEMENT TO BE DEDICATED TO THE CITY OF FERDALE.
- PLACING OR BACKFILLING OF UNDERGROUND DER THE S?????UTILITIES, STORM SEWER AND SANITARY SEWER WITHIN ROAD RIGHTS-OF-WAY, IN EASEMENTS TO BE DEDICATED TO THE CITY OF FERDALE, OR OTHER PUBLICLY SHARED FACILITIES.
- GRADING OF PUBLIC OR PRIVATE ROADWAY AT:
 - COMPLETION OF EXCAVATION TO SUBGRADE.
 - COMPLETION OF BALLAST COURSE PLACEMENT.
 - COMPLETION OF CRUSHED SURFACING COURSE PLACEMENT.
- POURING OF CURB AND GUTTER AND SIDEWALK IN PUBLIC ROADWAY.
- ASPHALT PAVING IN PROGRESS IN PUBLIC ROADWAY.
- OVERALL INSPECTION FOR FINISHED SHOULDERS, DITCHES, PERMANENT SEEDING AND MONUMENT PLACEMENT.
- END OF MAINTENANCE PERIOD.

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACTOR. ANY WORK WITHIN THE TRAVELED RIGHT-OF-WAY THAT MAY INTERRUPT NORMAL TRAFFIC FLOW SHALL REQUIRE AT LEAST ONE FLAGGER FOR EACH LANE OF TRAFFIC AFFECTED. A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO THE CITY FOR APPROVAL PRIOR TO PERFORMING THE WORK. ALL SECTIONS OF THE WSDOT SPECS., 1-07.23- TRAFFIC CONTROL, SHALL APPLY.

13. THE CONTRACTOR SHALL INFORM THE ENGINEER AND OBTAIN APPROVAL FROM THE CITY OF FERDALE PUBLIC WORKS DIRECTOR OF ANY PROPOSED DEVIATION FROM THE APPROVED PLANS PRIOR TO CONSTRUCTION OF THE REVISED IMPROVEMENTS. THE CONTRACTOR SHALL KEEP RECORDS OF ALL DEVIATIONS AND SHALL FORWARD THEM TO THE ENGINEER AND TO THE CITY OF FERDALE PUBLIC WORKS DEPARTMENT.

14. AS-BUILT DATA SHALL BE PROVIDED TO THE CITY OF FERDALE UPON COMPLETION OF CONSTRUCTION AND PROVIDED IN CITY OF FERDALE DATUM - VERTICAL (NGVD 29) AND HORIZONTAL (NAD 83/91). CONTACT THE CITY FOR MORE INFORMATION ON SUBMITTAL REQUIREMENTS.

UNDERGROUND UTILITIES CONSTRUCTION

- THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE ENGINEER TO ASSURE ACCURATE AND TIMELY COLLECTION OF ALL REQUIRED AS-BUILT DATA. THIS DATA MUST ACCURATELY REFLECT THE LOCATIONS OF ALL UNDERGROUND UTILITIES, BOTTOM OF PIPE ELEVATIONS, INVERT ELEVATIONS, MANHOLE LOCATIONS, WATER SERVICE TAPS, BLOW-OFF LOCATIONS AND INVERTS OF SERVICE CONNECTIONS (BOTH AT PIPE AND AT PROPERTY LINE). VERTICAL AND HORIZONTAL BENDS, SERVICE BOXES AND METERS, VALVES AND HYDRANTS. CALL THE ENGINEER AT LEAST 48-HOURS BEFORE BURYING UNDERGROUND PIPE TO ASSURE AND FACILITATE REQUIRED AS-BUILT SURVEY.
- THE CONSTRUCTION OF UNDERGROUND UTILITY LINES SHALL BE SUBJECT TO THE FOLLOWING CRITERIA:
 - NO MORE THAN 500 FEET OF TRENCH SHALL BE OPENED AT ONE TIME.
 - WHERE CONSISTENT WITH SAFETY AND SPACE CONSIDERATIONS, EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF DITCHES.
 - TRENCH Dewatering DEVICES SHALL DISCHARGE INTO SEDIMENT TRAPS OR SEDIMENT PONDS.
 - WHERE PRACTICAL, INSTALL GRAVITY PIPE UTILITIES PRIOR TO INSTALLATION OF OTHER UTILITIES.
 - UTILITY CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE COFDS.
 - ALL UTILITY TRENCHES IN THE RIGHT OF WAY SHALL BE BACKFILLED WITH BALLAST PER SECTION 9-03.9(1) WSDOT SPECS.
 - TESTING OF NEW WATER LINES, STORM SEWER SYSTEMS SHALL NOT BE PERFORMED UNTIL ALL OTHER ADJACENT UTILITIES HAVE BEEN INSTALLED.
 - ALL UTILITY TRENCHES SHALL BE BACKFILLED AND COMPACTED TO 95% RELATIVE COMPACTION OR 95% MODIFIED PROCTOR PER TRENCING DETAIL COFSD SS-15.
 - OPEN CUTTING OF EXISTING ROADWAYS IS ONLY ALLOWED AS APPROVED AND NOTED ON THESE APPROVED PLANS. ANY OPEN CUT SHALL BE RESTORED IN ACCORDANCE WITH THE CITY OF FERDALE STANDARD DETAIL (COFSD) R-11 AND SS-15.

15. NO PART OF THE DRAINAGE SYSTEM MAY BE COVERED, CONCEALED, OR PUT INTO USE UNTIL IT HAS BEEN INSPECTED, TESTED, AND ACCEPTED BY THE CITY INSPECTOR.

EARTHWORK

A. THE CONTRACTOR SHALL REMOVE AND REPLACE ALL EXISTING UN-COMPACTED OR POORLY COMPACTED FILL SOILS WITHIN THE ROAD PRISM AT THE DIRECTION OF THE ENGINEER.

B. THE CONTRACTOR SHALL EXCAVATE AND GRADE TO THE ALIGNMENT, GRADE AND CROSS-SECTIONS SHOWN IN THE PLANS OR ESTABLISHED BY THE PROJECT ENGINEER OF RECORD.

C. UNSUITABLE MATERIAL FOUND AND NOT FIT FOR USE AS A SUB-GRADE SHALL BE EXCAVATED TO THE BOUNDARIES SET BY THE ENGINEER AND REPLACED WITH A SUITABLE BACKFILL MATERIAL.

D. THE ENGINEER IS REQUIRED TO CERTIFY SUBGRADE, IN WRITING, PRIOR TO PAVING.

BASE COURSES & CRUSHED SURFACING

A. GRAVEL BASES AND BALLAST MATERIAL GRADATION SHALL MEET THE CURRENT EDITION OF WSDOT SPECS.

B. BALLAST, GRAVEL BASE AND CRUSHED SURFACING SHALL BE COMPACTED TO AT LEAST 95% OF MAXIMUM DRY DENSITY.

C. THE GRADED AND COMPACTED SURFACE OF THE CRUSHED SURFACING TOP COURSE SHALL BE WITHIN 1/4 INCH OF FINISHED GRADE.

D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIAL AND COMPACTION TESTING. PRIOR TO IMPORTING OF MATERIAL FOR BASE AND CRUSHED SURFACING TOP COURSE THE CONTRACTOR SHALL PROVIDE EVIDENCE OF SATISFACTORY PASSING GRADING AND DEGRADATION TEST RESULTS TO THE ENGINEER.

STORM DRAINAGE

1. THE FOLLOWING STANDARD DETAILS SHALL BE USED FOR CONSTRUCTION OF STORM DRAIN IMPROVEMENTS:
CATCH BASINS TYPE 1, 1L OR 2 WSDOT STD. DETAILS B-5-20, B-5-40 OR B-10-20
"RESIDENTIAL SERVICE LINE"
INLET & THRU-CURB INLET COFSD ST-7 & COFSD ST-8

2. STORM SEWER PIPE HAVING DIAMETERS GREATER THAN 8" SHALL BE CORRUGATED POLYETHYLENE PIPE (CPEP) PER SECTION 7-04 OF THE WSDOT SPECS. ALL OTHER STORM SEWER PIPE SHALL BE PVC UNLESS OTHERWISE SPECIFIED ON PLANS.

3. ALL CATCH BASIN GRATES SHALL INCLUDE THE STAMPING "OUTFALL TO STREAM, DUMP NO POLLUTANTS".

4. CONTROL DENSITY FILL SHALL BE USED IN AREAS WHERE LESS THAN 18" OF COVER IS MAINTAINED OVER THE PROPOSED STORM PIPES (PIPE IS IN ROAD BASE SECTION), AS SHOWN IN THE PLANS. DUCTILE IRON PIPE OR REINFORCED CONCRETE PIPE MAY BE USED FOR STORM PIPES WITH LESS THAN 18" OF COVER IF APPROVED BY THE CITY.

5. COVER OVER PIPES SHALL BE MAINTAINED DURING CONSTRUCTION. DEPTH OF COVER REQUIRED SHALL CONFORM TO THE MANUFACTURER'S RECOMMENDATIONS AND WILL VARY WITH THE VEHICLE LOADS TRAVELING OVER THE PIPE. NO ADDITIONAL COMPENSATION SHALL BE PROVIDED FOR DAMAGE TO PIPE DURING CONSTRUCTION ACTIVITIES.

6. AT THE END OF ALL SITE CONSTRUCTION, THE CONTRACTOR SHALL CLEAN ALL DEBRIS FROM ALL NEW AND AFFECTED CATCH BASINS AND STORMWATER CONVEYANCES. DEBRIS SHALL NOT BE ALLOWED TO ENTER STREAMS OR OFF-SITE STORMWATER SYSTEMS.

7. EACH STORM SEWER STUB SHALL BE CAPPED WITH A WATERIGHT PLUG. EACH STUB SHALL BE MARKED FOR LOCATION WITH A 2" DIA. WHITE PVC PIPE (MIN. SCHEDULE 40) STENCILED WITH THE WORD "DRAIN" AND THE PIPE INVERT INDICATED. THE LOCATION MARKER SHALL BE CONNECTED TO THE SERVICE STUB BY A #12 COPPER WIRE.

WATER

1. THE FOLLOWING STANDARD DETAILS SHALL BE USED IN CONSTRUCTING WATER SUPPLY SYSTEM IMPROVEMENTS:

PIPE BEDDING COFSD W-11
TRENCH BACKFILL COFSD W-11
FIRE HYDRANT ASSEMBLY COFSD W-1
THRUST BLOCKING COFSD W-2, W-3 & W-4
WATER SERVICE COFSD W-5

2. ALL WORK AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF FERDALE DEVELOPMENT STANDARDS, SECTIONS 702 AND 705 AND THE MOST RECENT VERSION OF THE WSDOT STANDARD PLANS.

3. ALL WATER MAIN PIPE SHALL BE DUCTILE IRON PER SECTION 9-30.1(1) OF THE WSDOT SPECS., UNLESS OTHERWISE APPROVED BY THE PUBLIC WORKS DIRECTOR.

4. MATERIAL FOR FITTINGS SUCH AS CROSSES, TEES, BENDS, REDUCERS AND SLEEVES SHALL BE DUCTILE IRON. JOINTS SHALL BE M.J., FLANGED OR PUSH-ON JOINTS AND SHALL CONFORM TO SECTION 9-30.2(1) OF THE WSDOT SPECS.

5. CONCRETE BLOCKING SHALL BE AS SPECIFIED IN CITY OF FERDALE STANDARD DETAILS W-2, W-3 AND W-4, OR AS DIRECTED BY THE PROJECT ENGINEER. BLOCKS SHALL BE INSTALLED AS SPECIFIED IN SECTION 7-09.3(21) OF THE WSDOT SPECS. NO PRE-CAST BLOCKS ARE ALLOWED.

6. CONNECTIONS TO EXISTING WATER MAINS - THE CONTRACTOR MUST NOTIFY THE CITY OF FERDALE PUBLIC WORKS DIRECTOR OF A PROPOSED CONNECTION AT LEAST FOUR WORKING DAYS IN ADVANCE.

7. ALL HYDROSTATIC TESTING AND DISINFECTION OF WATER MAINS SHALL CONFORM TO SECTION 7-09.3(23) AND SECTION 7-09.3(24) OF THE WSDOT SPECS. HYDROSTATIC TEST PRESSURE FOR WATER MAIN ACCEPTANCE SHALL BE 150 PSI IN EXCESS OF 100 PSI OPERATING PRESSURE FOR THE CITY OF FERDALE OR 250 PSI, THE HYDROSTATIC TESTING IS TO BE INSPECTED BY THE CITY. THE CONTRACTOR SHALL CALL AT LEAST 24 HOURS IN ADVANCE TO SCHEDULE INSPECTIONS. THE CITY OF FERDALE LABORATORY SHALL CONDUCT ALL DISINFECTION TESTS AND BACTERIOLOGICAL TESTS. THE PIPE WILL NOT PASS TESTING UNLESS A RESULT OF ZERO BACTERIAL COUNT IS MEASURED 24 HOURS AFTER THE PIPE PASSED HYDROSTATIC TEST AND FLUSHED.

8. BACKFILL SHALL BE BALLAST PER SECTION 9-03.9(1) WD, TESTED?????SDOT SPECS. IN ALL STREET RIGHTS-OF-WAY, COMPACTED TO MINIMUM 95% RELATIVE COMPACTION. IN UNIMPROVED AREAS, MINIMUM COMPACTION SHALL BE 90% OF RELATIVE COMPACTION.

9. ALL PIPES SHALL HAVE A MINIMUM COVER OF 42".

10. ALL VALVES SHALL BE EITHER GATE OR BUTTERFLY TYPE VALVES AND SHALL BE INSTALLED WITH SLIP TYPE CAST IRON VALVE BOXES. GATE VALVES SHALL BE USED FOR LINES 2 INCHES THROUGH TO INCHES IN DIAMETER. GATE VALVE MAY BE USED IN LIEU OF BUTTERFLY VALVE FOR 12" LINES IF APPROVED BY THE CITY. SHORT-BODY VALVES SUITABLE FOR A NON-SHOCK SHUT-OFF PRESSURE OF 130 PSI AND SUITABLE FOR DIRECT BURIAL ARE SPECIFIED. GATE VALVES SHALL BE RESILIENT SEATED IRON-BODY, FULL-BRONZE MOUNTED VALVES CONFORMING TO ANWA C509 AND SUITABLE FOR SERVICE WITH THE TYPE AND CLASS OF PIPE USED. ALL VALVES SHALL HAVE NON-RISING STEMS AND SHALL OPEN COUNTERCLOCKWISE AND SHALL BE EQUIPPED WITH A 2 INCH SQUARE OPERATING NUT. VALVES WILL BE FLANGE OR M.J. JOINTS. VALVE MARKERS SHALL BE LOCATED OUTSIDE OF PAVEMENT SECTIONS.

11. WATER SERVICE TAP INSTALLATIONS SHALL MEET THE REQUIREMENTS OF THE COFSD W-5.

12. FIRE HYDRANTS AND FIRE MAINS MUST CONFORM TO COFDS (COFSD W-1, WSDOT B-19) AND THE FOLLOWING STANDARDS:

- FIRE HYDRANTS SHALL HAVE TWO INDIVIDUALLY VALVED 2-1/2" PORTS AND ONE 5-1/4" MAIN VALVE OPENING. A 4-1/2" NST PUMPER NOZZLE AND A 5" STORZ PORT WITH CAP AND AIRCRAFT CABLE SHALL BE SUPPLIED. HYDRANTS SHALL BE EITHER IOWA OR M.H. 929T HYDRANTS.
- FIRE HYDRANTS SHALL HAVE THE STORZ PORT FACING THE REQUIRED ACCESS AND THE BASE FLANGE OF THE HYDRANT MUST NOT VARY MORE THAN 1 FOOT IN ELEVATION FROM THE GRADE LEVEL OF THE REQUIRED ACCESS. THE LOWEST STEM SHALL BE A MINIMUM OF 14" ABOVE THE GROUND.
- IF THE PUBLIC WORKS DIRECTOR DETERMINES THAT FIRE HYDRANTS ARE VULNERABLE TO VEHICULAR DAMAGE, APPROPRIATE HYDRANT GUARD POSTS SHALL BE PROVIDED. NO OBSTRUCTIONS SHALL EXIST WITHIN A 3-FOOT WORKING AREA OF EACH REQUIRED ACCESS. CRASH POSTS SHALL BE 4" CEMENT-FILLED PIPE A MIN. OF 3' IN HEIGHT WITH A MIN. OF 2' OF PIPE BELOW GRADE. HYDRANT SHUTOFF VALVES SHALL BE LOCATED BETWEEN 5' AND 20' FROM THE HYDRANT.
- UNDERGROUND SUPPLIES TO FIRE HYDRANTS MUST BE INSPECTED. SUCH INSPECTION SHALL INCLUDE VISUAL INSPECTION OF PIPING AND HYDROSTATIC PRESSURE TESTING TO A MIN. OF 250 PSI. A FLOW TEST WILL BE REQUIRED WHEN INSTALLATION IS COMPLETE.
- FIRE HYDRANTS MUST BE MAINTAINED IN AN OPERABLE CONDITION AT ALL TIMES AND MUST BE REPAIRED OR REPLACED WHEN DEFECTIVE. HYDRANTS SHALL BE FULLY OPERABLE BEFORE CONSTRUCTION COMMENCES ABOVE GRADE LEVEL.

ROAD

1. THE FOLLOWING STANDARD DETAILS SHALL BE USED FOR CONSTRUCTION OF THE STANDARD STREET SECTION:

TYPICAL STREET SECTION (PER PROJECT)
PVC CURB AND GUTTER COFSD R-9
PVC SIDEWALKS COFSD R-12 (SEE CONSTRUCTION DOCUMENTS TYPICAL SECTION)
PVC SIDEWALK RAMPS WSDOT STD. DETAIL F-40 AND F-42

2. ROADWAY EXCAVATION WITHIN THE ROADWAY PRISM SHALL BE CUT TO A UNIFORM GRADE. THE COMPLETED SUBGRADE SURFACE SHALL NOT VARY MORE THAN 0.10-FOOT FROM THE LOWER EDGE OF A 15-FOOT STRAIGHTEDGE PLACED ON THE SUBGRADE PARALLEL TO THE CENTERLINE UNLESS APPROVED BY THE ENGINEER.

3. THE OWNER SHALL PROVIDE TO THE ENGINEER A REPORT FROM A QUALIFIED GEOTECHNICAL FIRM CERTIFYING THE COMPACTION OF THE GRAVEL BASE/BALLAST UNDER ALL PAVING AREAS.

4. HOT MIX ASPHALT WORK SHALL BE DONE IN ACCORDANCE WITH SECTION 5-04 OF THE WDOT SPECS., EXCEPT AS MODIFIED HEREIN. CONNECTION TO EXISTING PAVEMENT SHALL BE TO A STRAIGHT NEATLY-TRIMMED LINE.

5. CRUSHED ROCK SURFACING FOR PAVEMENT SHALL BE IN ACCORDANCE WITH WSDOT SPECS., SECTION 9-03.9(3); BALLAST PER SECTION 9-03.9(1).

6. CEMENT CONCRETE SHALL BE CLASS 3000 (WITH AIR ENTRAINMENT) IN ACCORDANCE WITH WSDOT SPECS., SECTION 6-02.3(2)B.

7. CEMENT CONCRETE SIDEWALK SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS OR AS DESIGNATED BY THE ENGINEER IN ACCORDANCE WITH COFSD R-12.

8. CEMENT CONCRETE DRIVEWAYS SHALL BE 6 INCHES THICK AND CONSTRUCTED WHERE SHOWN ON THE PLANS OR DESIGNATED BY THE ENGINEER IN ACCORDANCE WITH THE COFSD R-15. A 2- INCH LAYER OF 3/4 INCH DRAIN ROCK SHALL BE USED FOR DRIVEWAY BEDDING.

9. CEMENT CONCRETE CURB AND GUTTER SHALL BE CONSTRUCTED WHERE SHOWN ON THE PLANS OR AS DESIGNED BY THE ENGINEER, IN ACCORDANCE WITH WSDOT SPECS., SECTION 8-04 AND COFSD R-8 AND R-9. HANDICAP RAMPS SHALL BE CONSTRUCTED PER WSDOT STANDARD DETAIL F-40. WHEN NEW CEMENT CONCRETE CURB AND GUTTER IS TO CONNECT TO EXISTING CURB AND GUTTER, ASSURE THAT NO ABRUPT OFFSETS IN LINE OR GRADE SHALL BE CONSTRUCTED WHICH WILL BE UNSIGHTLY OR IMPEDE FLOW IN THE GUTTER LINE.

10. PAVEMENT:

- SOIL RESIDUAL HERBICIDE SHALL BE PLACED WITHIN 24 HOURS OF PAVING.
- A TACK COAT OF ASPHALT SHALL BE APPLIED BETWEEN ALL COURSES OF ASPHALT.
- ALL PAVEMENT REPAIR SHALL BE SAW-CUT BEFORE REMOVAL. AIR-ADDON SHALL BE APPLIED TO ALL EDGES OF EXISTING PAVEMENT. WHERE NEWLY CONSTRUCTED PAVING MEETS EXISTING PAVING, THE APPLICANT SHALL PROVIDE A SMOOTH TRANSITION FROM EXISTING TO PROPOSED PAVING. CONTRACTOR SHALL COLD PLANE PER DIMENSIONS SPECIFIED ON THE PLANS, AND INSTALL A MINIMUM 2-FOOT WIDE PETROCAT PAVING FABRIC, OR EQUIVALENT, OVER JOINT BETWEEN PAVING LIFTS.

11. THRU-CURB BASINS AND THRU-CURB INLETS CONFORMING TO THE WSDOT SPECS, SECTION 7-05 SHALL BE CONSTRUCTED AT THE LOW POINT OF THE CURB FLOW LINES AND TO THE LOCATIONS, DIMENSIONS, AND DETAILS AS SHOWN ON THE PLANS OR DESIGNATED BY THE ENGINEER AND COFSD- R-8.

12. TRENCH EXCAVATIONS, BEDDING AND PIPE FOR STORMWATER PIPE-LAYING SHALL BE IN ACCORDANCE WITH THE WSDOT SPECS., SECTION 7-08.

13. STORM SEWER PIPE CONSTRUCTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH WSDOT SPECS., SECTION 7-04. LOTS' STORM DRAIN SERVICE LINE SHALL BE 6" PVC PER WSDOT SPECS., SECTION 9-05.1(5)

14. PERFORATED UNDERDRAIN PIPE SHALL MEET THE WSDOT SPECS., 7-01.3(2).

SANITARY SEWER SYSTEMS

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH COFDS, COFSD, A.P.W.A. STANDARD SPECIFICATIONS, AND WSDOT SPECS. SANITARY SEWER SYSTEM INSTALLATION, BOTH PUBLIC AND PRIVATE, IS SUBJECT TO CITY REVIEW AND APPROVAL.

2. ALL WORK MUST BE INSPECTED TO THE SATISFACTION OF THE CITY OF FERDALE. 24 HOUR NOTICE MUST BE GIVEN PRIOR TO STARTING WORK. TESTING OF THE SEWER SYSTEM AND ALL CONNECTIONS TO EXISTING MAINS SHALL BE PERFORMED IN THE PRESENCE AND UNDER THE SUPERVISION OF A CITY OF FERDALE REPRESENTATIVE.

3. SANITARY SEWER MAINS SHALL BE A MINIMUM 8 INCH DIAMETER PVC PIPE CONFORMING TO WSDOT SPECS. 9-05.12(1) AND INSTALLED PER COFDS.

4. SANITARY SEWER PIPE BEDDING SHALL BE PEA GRAVEL PER COFSD SS-1. ALL TRENCHES SHALL BE BACKFILLED WITH BALLAST WITHIN CITY RIGHT OF WAY AND TRAVELED WAYS OUTSIDE OF RIGHT OF WAY (ACCESS EASEMENTS) AND SHALL BE COMPACTED TO A MINIMUM DENSITY OF 95% MODIFIED PROCTOR. USE OF SUITABLE NATIVE BACKFILL OUTSIDE OF TRAVELED WAY SHALL BE SUBJECT TO APPROVAL BY THE CITY.

5. ALL MANHOLES SHALL BE INSTALLED PER COFSD SS-2, SS-3, AND SS-4 AND SHALL BE PRE-CHANNELED. MANHOLE CONES ARE TO BE OFFSET SUCH THAT LADDER RUNGS ARE PARALLEL TO THE FLOW.

6. ALL SIDE SEWERS SHALL BE INSTALLED PER COFSD SS-6, SS-8 OR SS-13, EXCEPT THAT SINGLE SIDE SEWERS SHALL HAVE A MINIMUM DIAMETER OF 4".

7. CONTRACTOR SHALL EXTEND SEWER STUBS 5 FT BEYOND UTILITY CORRIDOR OR 15 FEET BEYOND RIGHT-OF-WAY LINE.

8. EACH SIDE SEWER STUB SHALL BE CAPPED WITH A WATERIGHT PLUG. EACH STUB SHALL BE MARKED FOR LOCATION WITH A 2" DIA. WHITE PVC PIPE (MIN. SCHEDULE 40) WITH THE TOP 18" PAINTED GREEN AND STENCILED WITH THE WORD "SEWER" AND THE PIPE INVERT INDICATED. THE LOCATION MARKER SHALL BE CONNECTED TO THE SERVICE STUB BY A #12 COPPER WIRE.

APPROVED

JUN 22 2012
BY *J. Campbell*, P.E.
CITY OF FERDALE

CITY OF FERDALE
PROJECT #110011.LDP

AS-BUILT

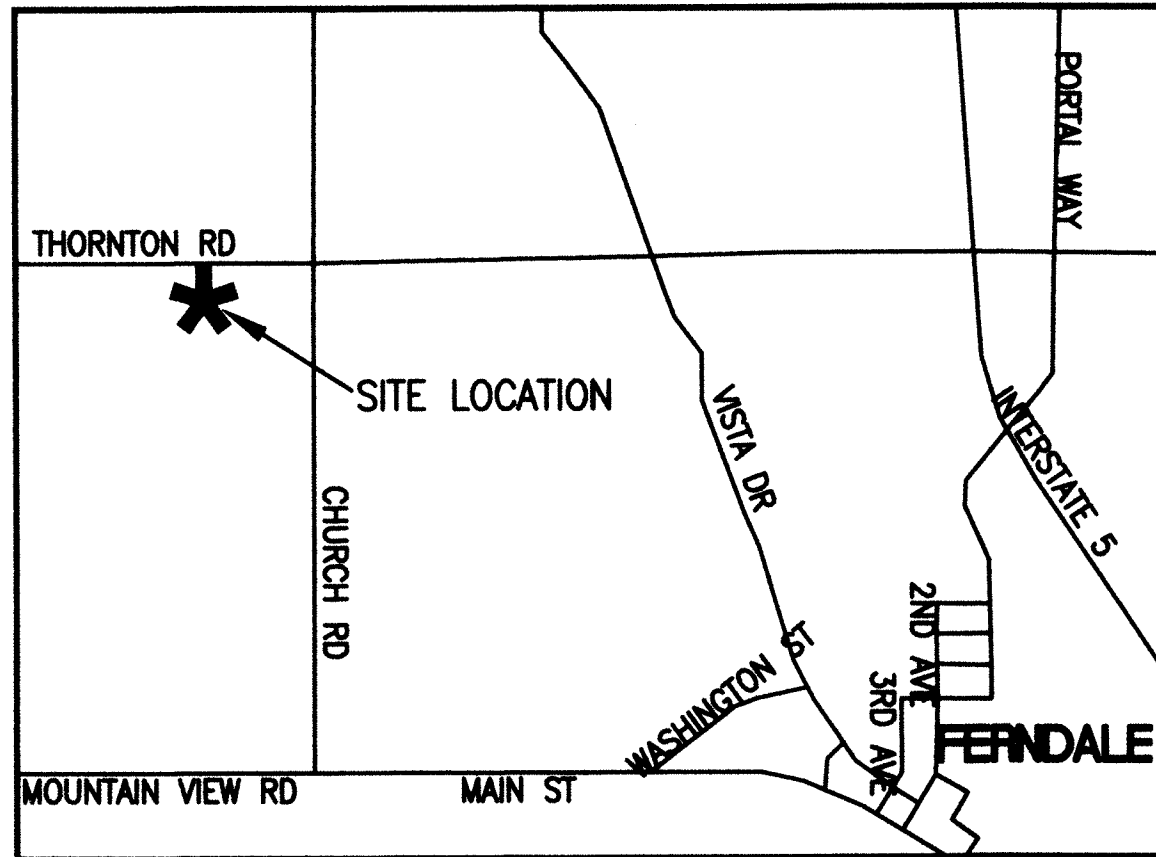
ENGINEER'S CERTIFICATION

I HEREBY CERTIFY THAT THE IMPROVEMENTS IN THORNTON/CHURCH SHORT PLAT UTILITY SERVICES HAVE BEEN INSPECTED BY THE CITY OF FERDALE AND TO THE BEST OF MY KNOWLEDGE, HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE CITY OF FERDALE DEVELOPMENT STANDARDS, THE CITY OF FERDALE MUNICIPAL CODE, SUBSEQUENT STANDARDS ADOPTED BY REFERENCE THEREIN, AND STANDARD ENGINEERING PRACTICE.

J. Campbell, P.E.
DOUGLAS N. CAMPBELL, P.E.
PRINCIPAL
DATE June 13, 2012

CIVIL SHEET INDEX

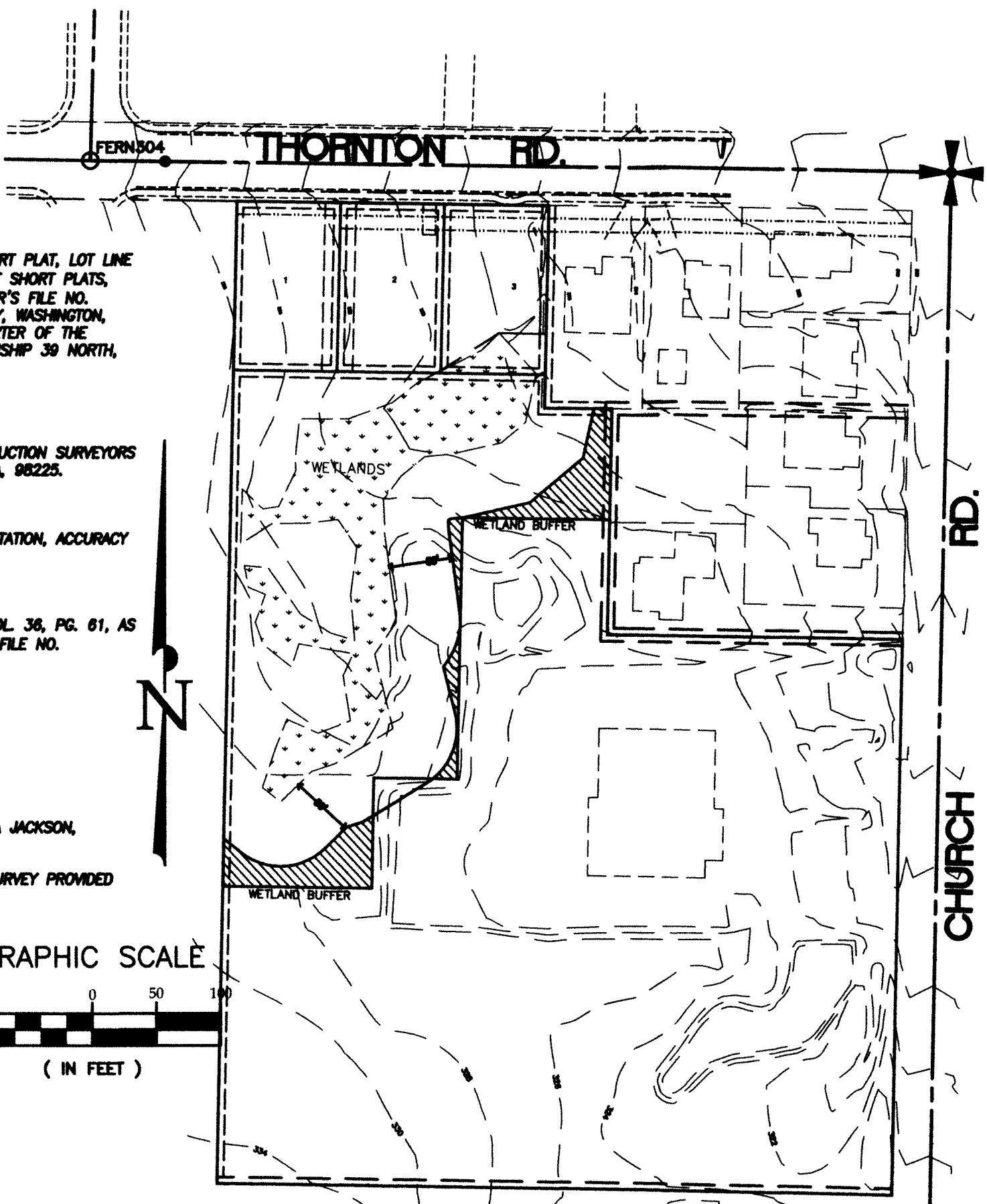
- COVER SHEET AND GENERAL NOTES
- UTILITY SERVICE PLAN
- DETAILS



VICINITY MAP

1 Inch = 2000 Feet

SECTION 24, TOWNSHIP 39 N, RANGE 1 E. OF W.M.



EXISTING SITE CONDITIONS MAP

LEGAL DESCRIPTION

LOT 8 OF "2ND AMENDMENT TO JUNET SHORT PLAT, LOT LINE ADJUSTMENT," RECORDED IN VOLUME 38 OF SHORT PLATS, PAGE 81, UNDER WHATCOM COUNTY AUDITOR'S FILE NO. 970328251, RECORDS OF THE NORTH-EAST QUARTER OF THE NORTH-EAST QUARTER OF SECTION 24, TOWNSHIP 39 NORTH, RANGE 1 EAST OF W.M. APN: 300124 540325 0000

SURVEY NOTE:

SURVEY INFORMATION PROVIDED BY CONSTRUCTION SURVEYORS N.W., INC., 1500 1 STREET, BELLINGHAM, WA, 98225.

SURVEY METHOD:

FIELD TRVERSE WITH LIETZ SET 4 TOTAL STATION, ACCURACY 1:10000.

BASIS OF BEARING:

2ND AMENDMENT TO JUNET SHORT PLAT, VOL. 38, PG. 81, AS FILED UNDER WHATCOM COUNTY AUDITOR'S FILE NO. 970328251.

VERTICAL DATUM:

NGVD 29 (CITY OF FERDALE)

WETLAND NOTES

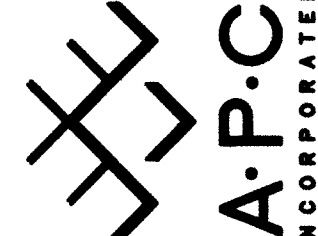
1. WETLANDS LOCATION FLAGGED BY KATRINA JACKSON, NORTHWEST WETLANDS CONSULTING LLC.

2. WETLAND FLAGS AND PROPERTY LINES SURVEY PROVIDED BY CONSTRUCTION SURVEYORS NORTHWEST.

REVISION:	DRAWN BY:	DATE:	CHECKED BY:	DATE:
1				
2				
3				
4				



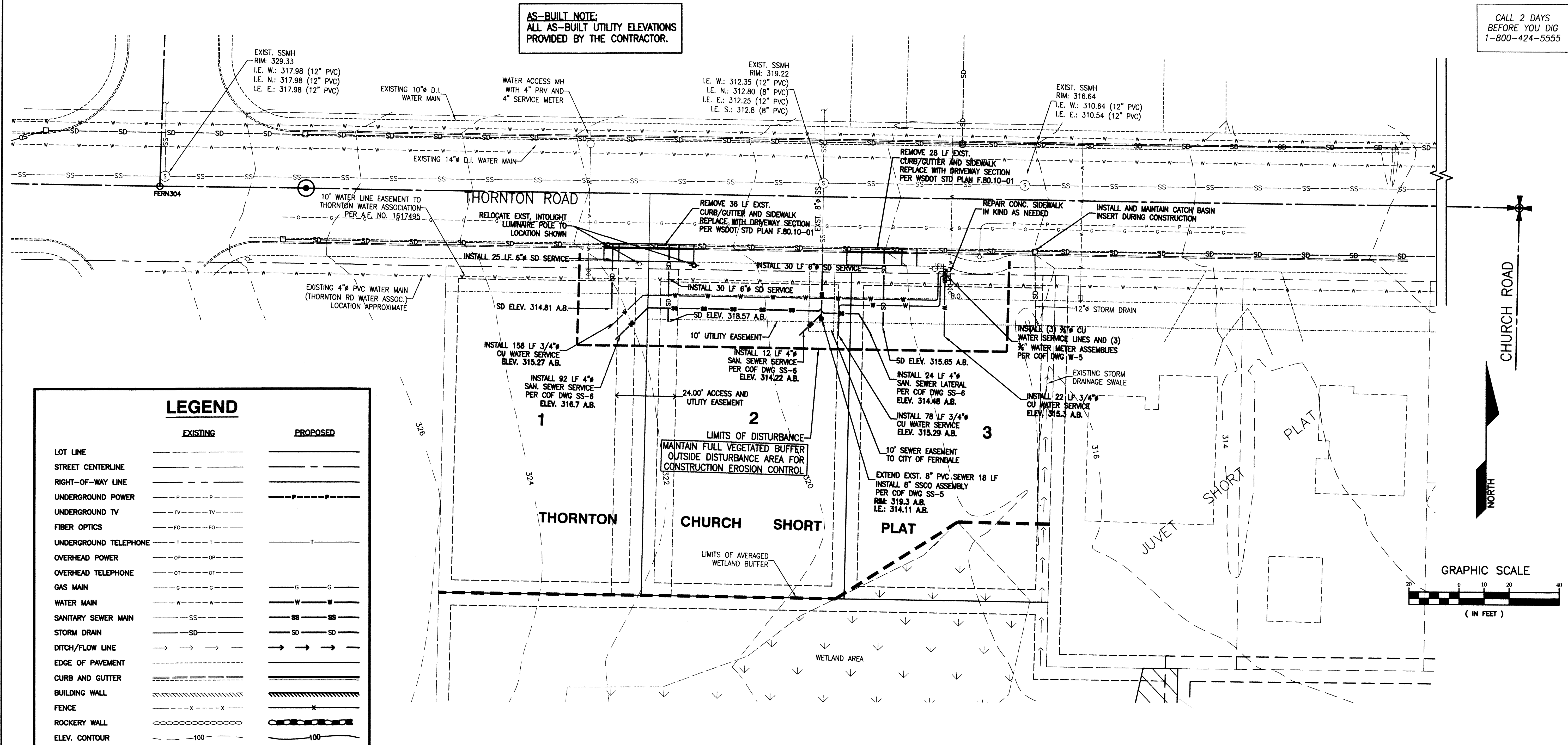
ASSOCIATED PROJECT CONSULTANTS, INC., P.S.
CIVIL ENGINEERS, PROJECT AND LAND USE MANAGEMENT,
BUILDING, STRUCTURAL, AND ENVIRONMENTAL SERVICES
1401 ASTOR STREET, BELLINGHAM, WA. 98225
PHONE (360) 671-1146 FAX (360) 671-1169



HORIZONTAL SCALE: 1" = 20'	VERTICAL SCALE: None	DRAWN BY: NGR	APPROVED BY: JNC
DATE: 06/23/11	NORTH ROTATION: & BASE POINT:		

Whatcom County Fire District #7
Thornton / Church Short Plat
Utility Service Plan

CLIENT: JOB NO.: 07-103 ACAD FILE: Prelim Utilities	PROJECT: SHEET: 1	TITLE: 3
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AS-BUILT NOTE:
ALL AS-BUILT UTILITY ELEVATIONS
PROVIDED BY THE CONTRACTOR.

CALL 2 DAYS
BEFORE YOU DIG
1-800-424-5555

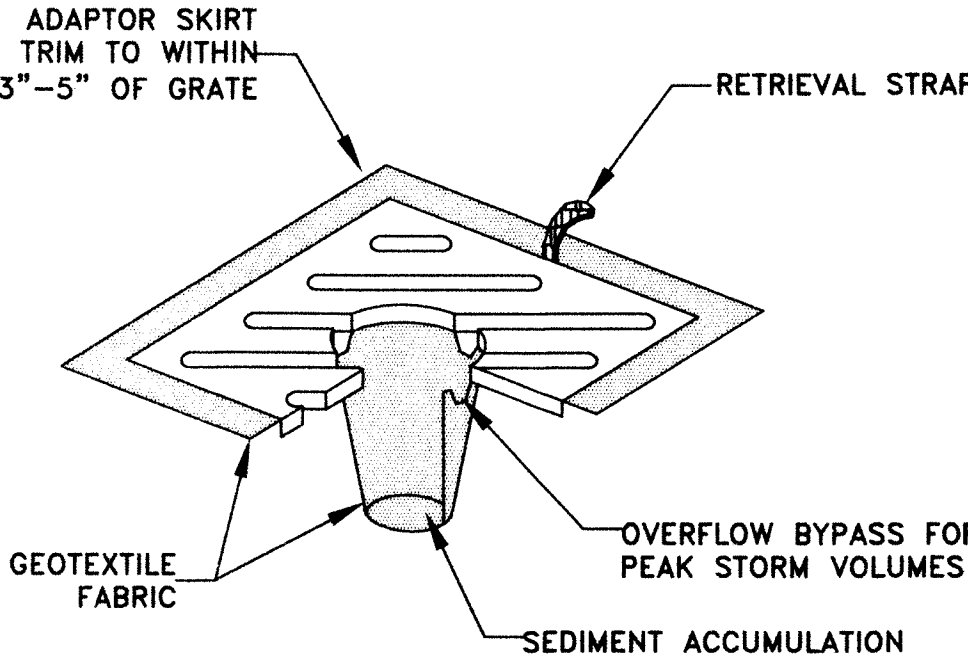
LEGEND

	EXISTING	PROPOSED
LOT LINE	---	---
STREET CENTERLINE	---	---
RIGHT-OF-WAY LINE	---	---
UNDERGROUND POWER	---P---	---P---
UNDERGROUND TV	---TV---	---TV---
FIBER OPTICS	---FO---	---FO---
UNDERGROUND TELEPHONE	---T---	---T---
OVERHEAD POWER	---OP---	---OP---
OVERHEAD TELEPHONE	---OT---	---OT---
GAS MAIN	---G---	---G---
WATER MAIN	---W---	---W---
SANITARY SEWER MAIN	---SS---	---SS---
STORM DRAIN	---SD---	---SD---
DITCH/FLOW LINE	--->---	--->---
EDGE OF PAVEMENT	---	---
CURB AND GUTTER	---	---
BUILDING WALL	---	---
FENCE	---	---
ROCKERY WALL	---	---
ELEV. CONTOUR	---	---

TREES/VEGETATION	---	---
STORM DRAIN CATCH BASIN	---	---
UTILITY POLE	---	---
STREET/TRAFFIC SIGN	---	---
SAN. SEWER MANHOLE	---	---
SAN. SEWER CLEAN-OUT	---	---
WATER SERVICE METER	---	---
FIRE HYDRANT	---	---
POWER UTILITY VAULT	---	---
TELEPHONE RISER	---	---
MAILBOX	---	---

ABBREVIATIONS

C.L.	CENTERLINE
COF	CITY OF FERNDALE
C.U.	COPPER PIPE
COMP	CORRUGATED METAL PIPE
CONC.	CONCRETE
CPSP	CORRUGATED HDPE STORM SEWER PIPE
D.I.	DUCTILE IRON PIPE
DOE	DEPARTMENT OF ECOLOGY
DWG	DRAWING
EL./ELEV.	ELEVATION
EXIST.	EXISTING
I.E.	INVERT ELEVATION
LF	LINEAR FEET
N.T.S.	NOT TO SCALE
P.E.	POLYETHYLENE
P.L.	PROPERTY LINE
PVC	POLY VINYL CHLORIDE PIPE
R.O.W., R/W	RIGHT-OF-WAY LINE
SD	STORM DRAIN
SDCB / CB	STORM DRAIN CATCH BASIN
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEANOUT
SSMH	SANITARY SEWER MANHOLE
SWMM/SHMM	STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON
SWPPP	STORMWATER POLLUTION PREVENTION PLAN
TESOP	TEMPORARY EROSION AND SEDIMENT CONTROL PLAN
TYP.	TYPICAL
A.B.	AS BUILT



CATCH BASIN INSERT
NOT TO SCALE

EROSION CONTROL NOTES:

- NO TURBID OR POLLUTED RUNOFF SHALL BE ALLOWED TO DISCHARGE FROM THE SITE. THE CONTRACTOR SHALL BE RESPONSIBLE TO IMPLEMENT AND MAINTAIN BEST MANAGEMENT PRACTICES, AND TO MANAGE THE CONSTRUCTION TO PREVENT RISK OF SOIL EROSION.
- ALL EROSION, SEDIMENTATION, AND STORMWATER POLLUTION PREVENTION BEST MANAGEMENT PRACTICES (BMPs) SHALL BE IN ACCORDANCE WITH THE 2005 DEPARTMENT OF ECOLOGY STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON.
- CATCH BASINS ACCEPTING RUNOFF FROM THE SITE SHALL HAVE INLET PROTECTION CATCH BASIN INSERTS INSTALLED AND MAINTAINED THROUGHOUT CONSTRUCTION.
- ALL DISTURBED AREAS OR EXPOSED SOILS SHALL BE COVERED WITH MULCH OR WOOD CHIPS IF SOILS ARE TO REMAIN UNWORKED FOR MORE THAN 2 DAYS, OCTOBER 1 THROUGH APRIL 30, OR 7 DAYS, MAY 1 THROUGH SEPTEMBER 30. UPON COMPLETION OF CONSTRUCTION, ALL DISTURBED AREAS AND CUT/FILL SLOPES ARE TO BE SEEDED WITH THE FOLLOWING EROSION CONTROL SEED MIXTURE:

75-80% TALL FESCUE
10-15% SEASIDE/COLONIAL BENTGRASS
5-10% REDTOP

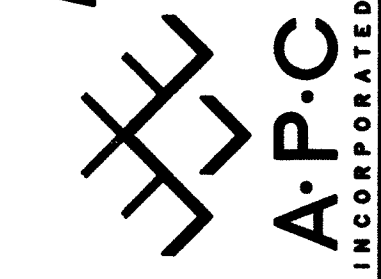
CONTRACTOR SHALL BE RESPONSIBLE FOR VEGETATION UNTIL IT IS FULLY ESTABLISHED, AS APPROVED BY THE ENGINEER.
- ALL SAWCUTTING AND SURFACING SHALL BE PERFORMED IN ACCORDANCE WITH DEPARTMENT OF ECOLOGY BMP C152. SLURRY AND CUTTINGS SHALL BE VACUUMED DURING SAWCUTTING OPERATIONS, SHALL NOT REMAIN ON PERMANENT PAVEMENT OVERNIGHT, SHALL NOT DRAIN TO ANY NATURAL OR CONSTRUCTED DRAINAGE CONVEYANCE, AND SHALL BE DISPOSED OF IN A MANNER THAT DOES NOT VIOLATE GROUNDWATER OR SURFACE WATER QUALITY STANDARDS.

REVISION:	DRAWN BY:	DATE:	CHECKED BY:	DATE:
1				
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APPROVED
JUN 22 2012
By *[Signature]* P.E.
CITY OF FERNDALE

CITY OF FERNDALE
PROJECT #110011.LDP
AS-BUILT

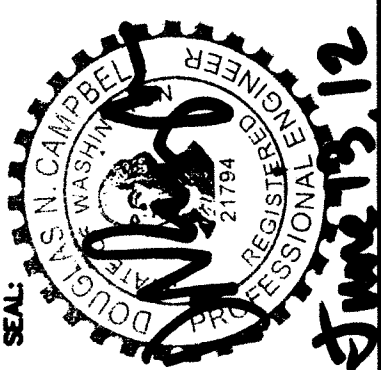
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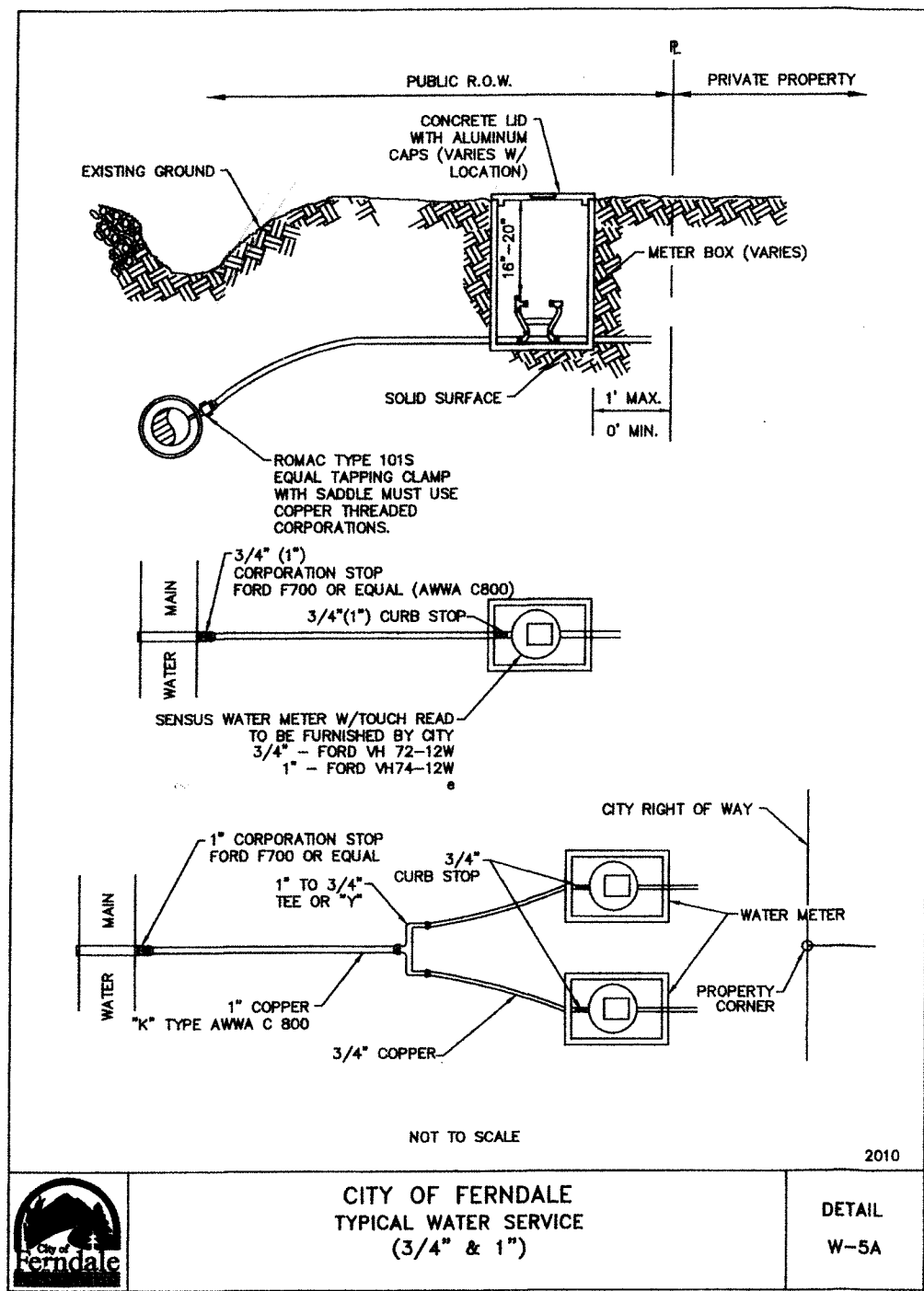
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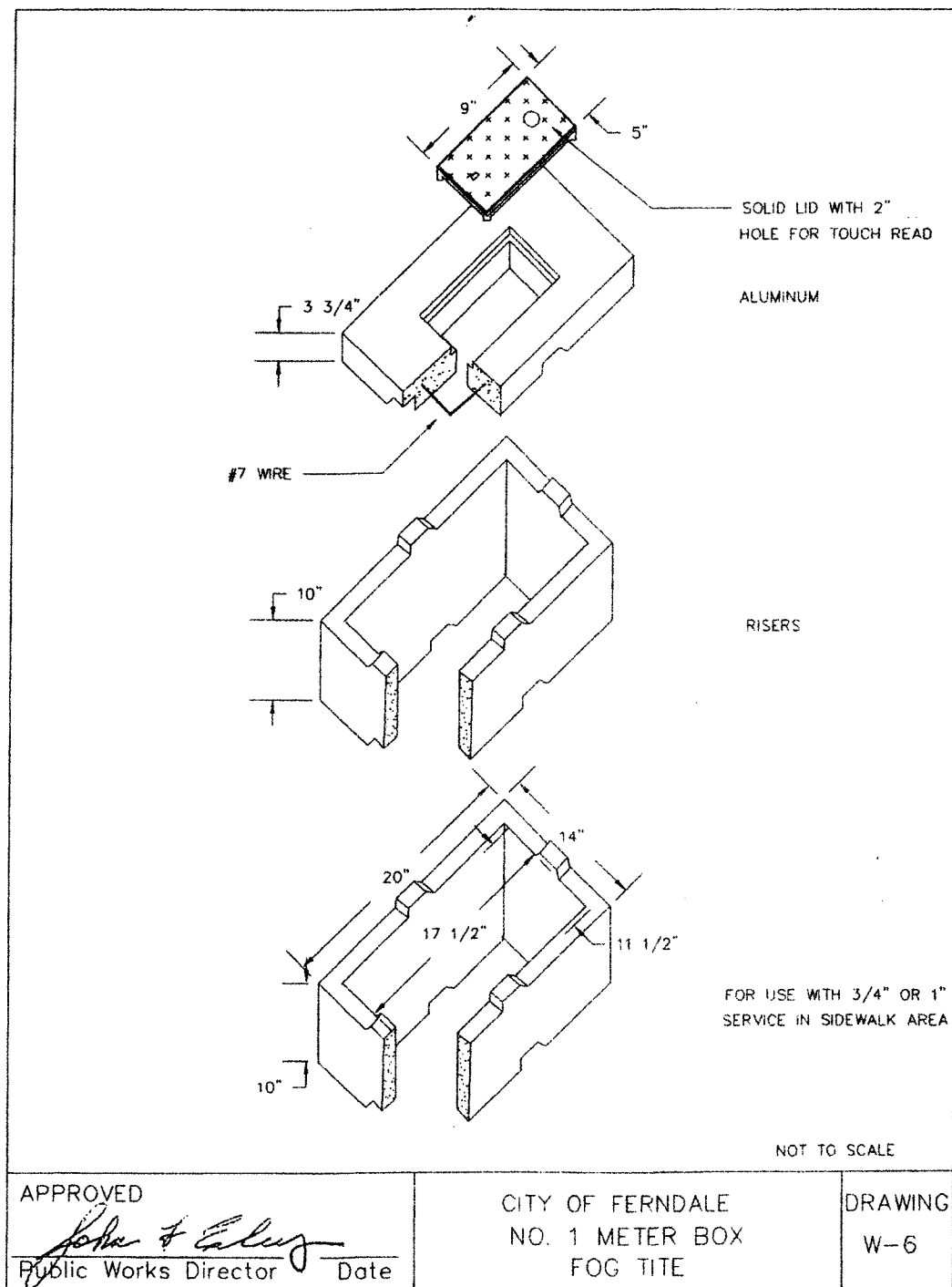
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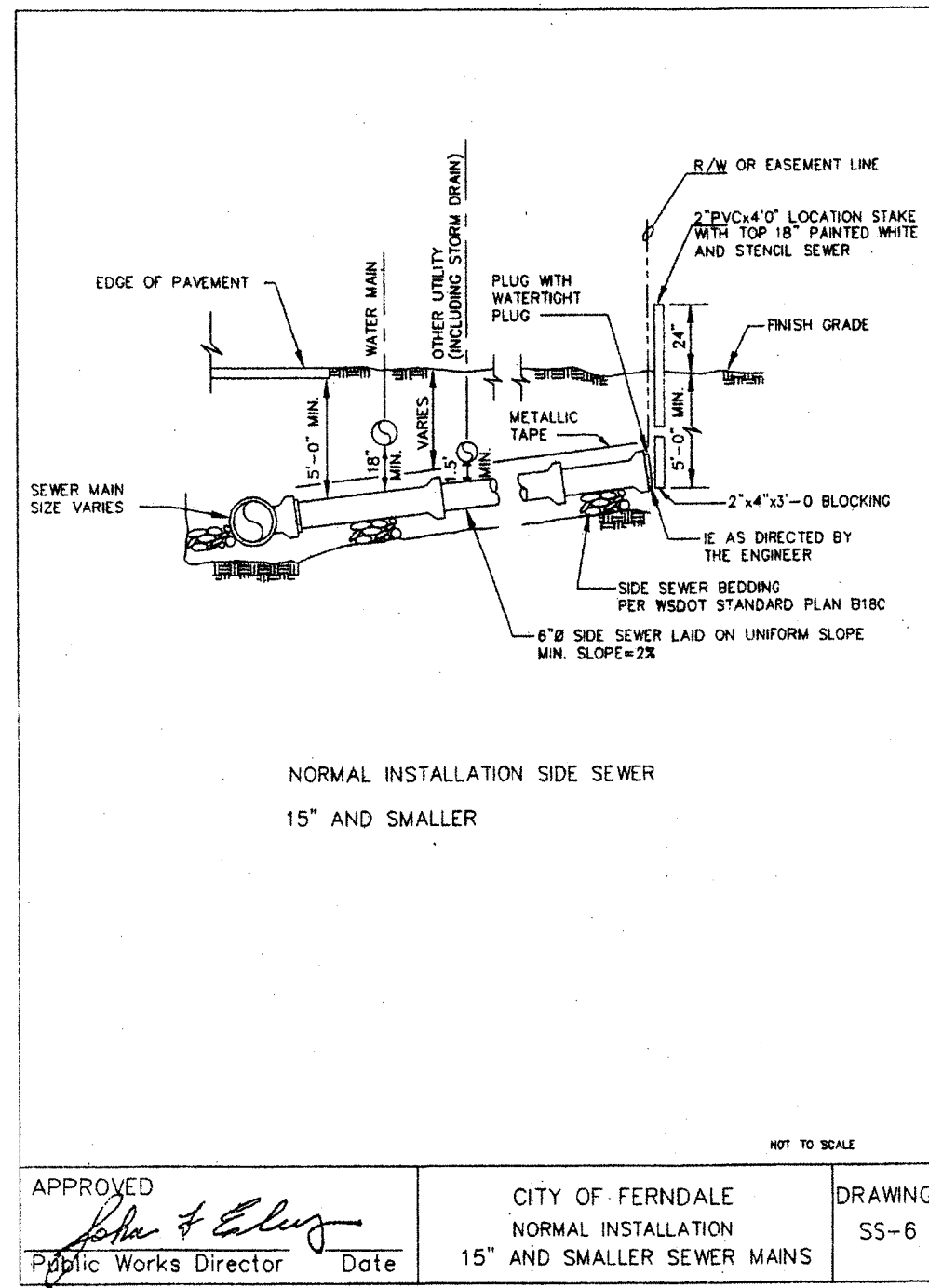
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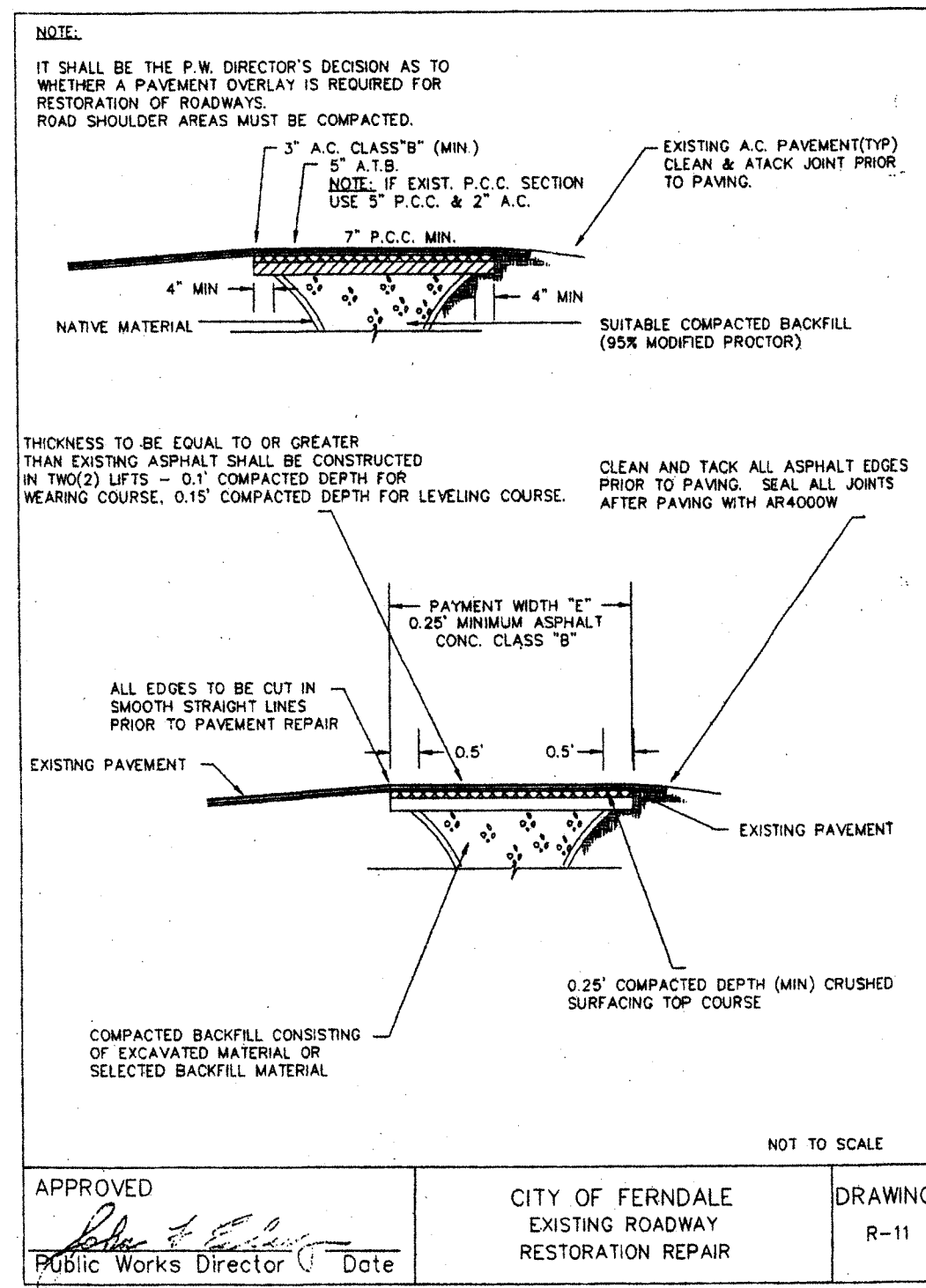
WATER SERVICE
NOT TO SCALE



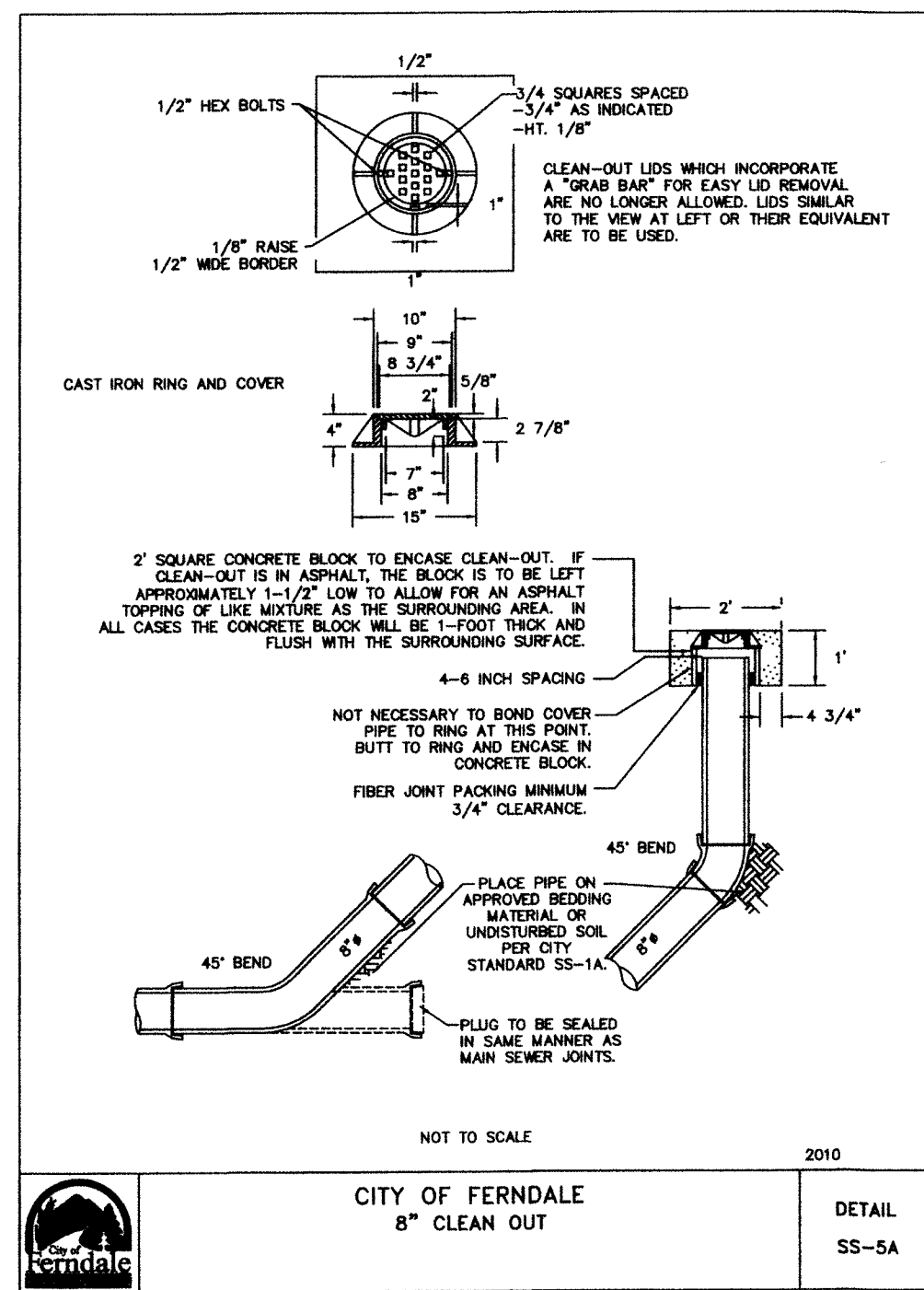
WATER METER BOX
NOT TO SCALE



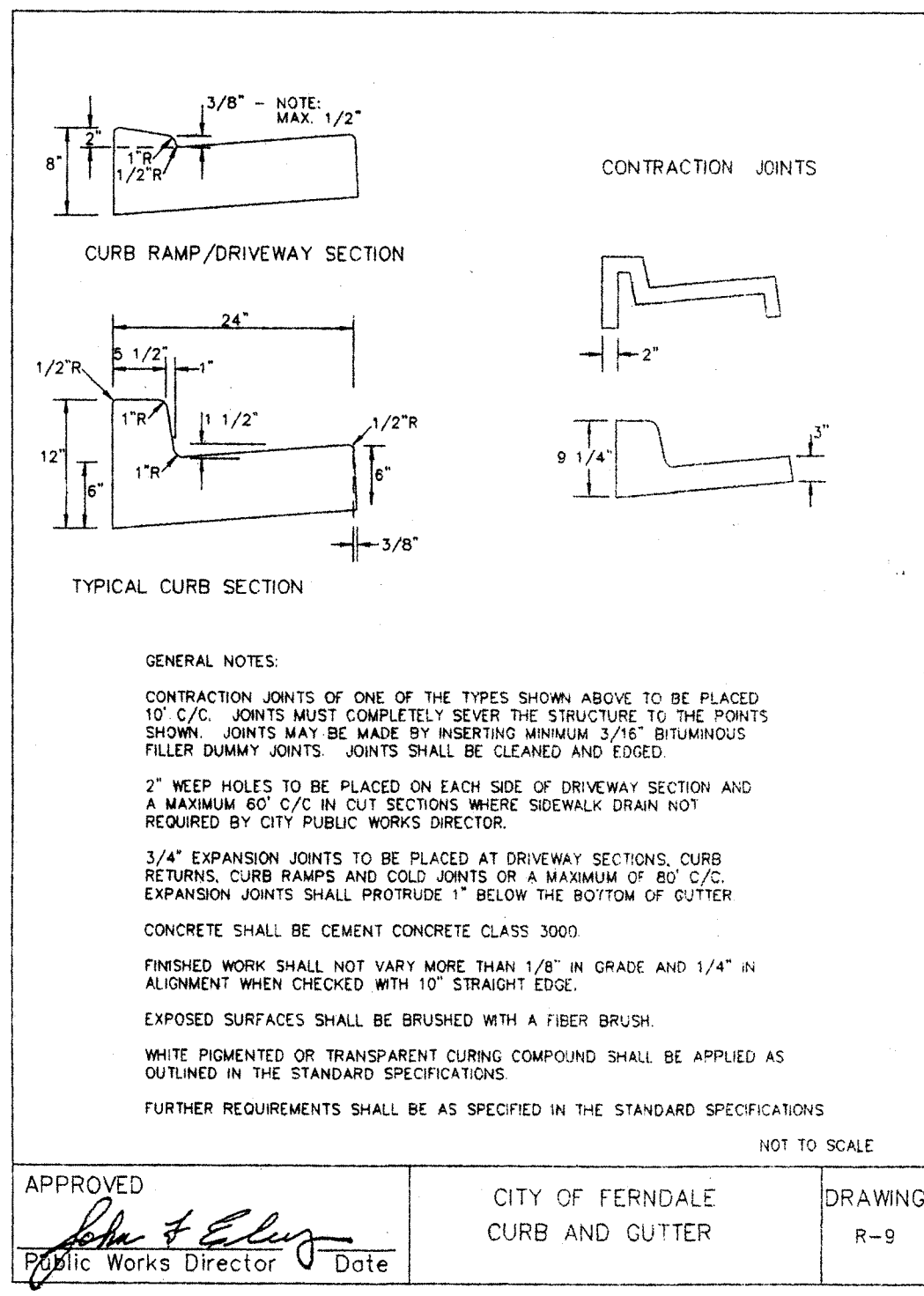
SANITARY SEWER SERVICE TAP
NOT TO SCALE



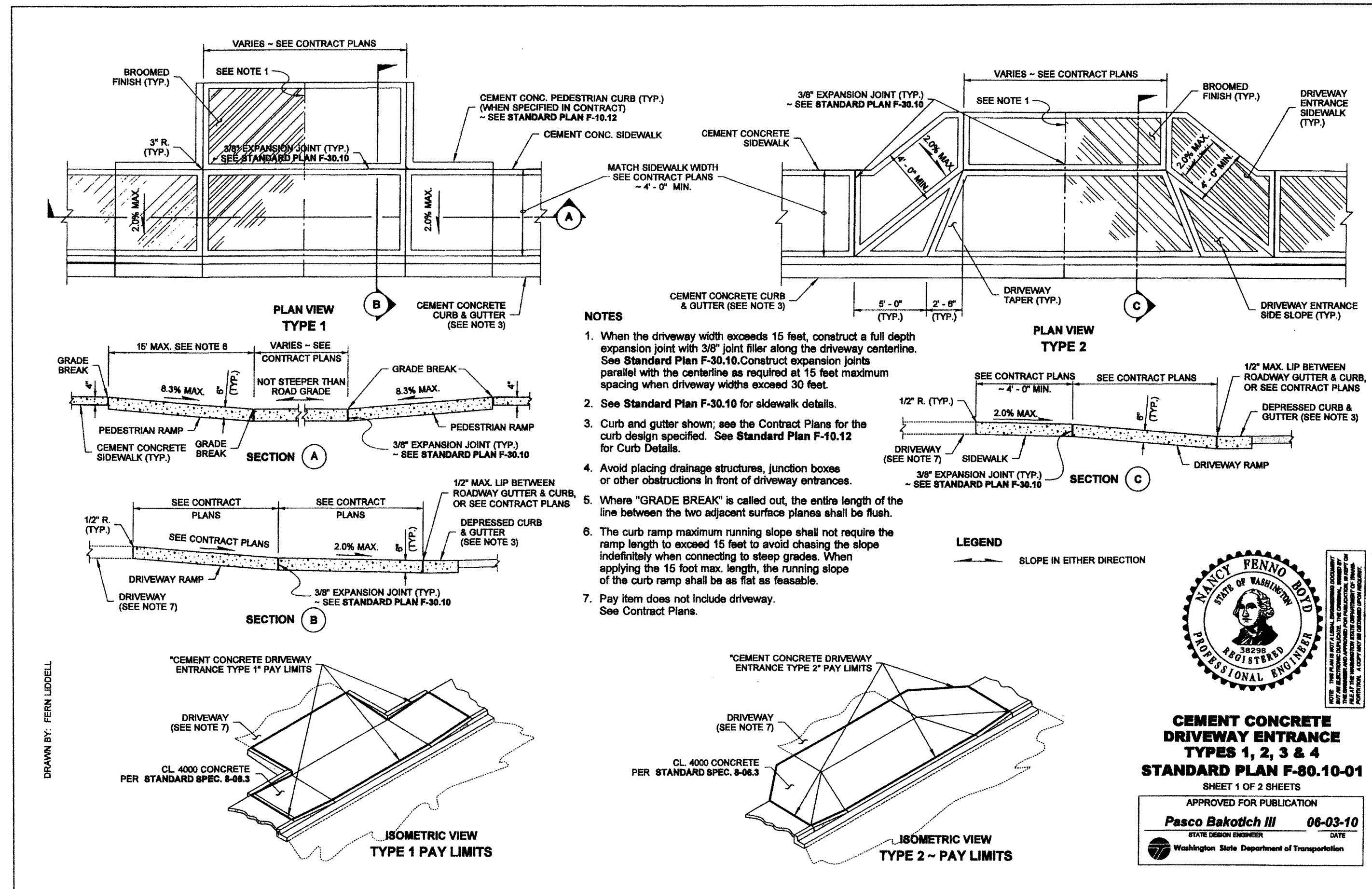
PAVEMENT REPAIR
NOT TO SCALE



SAN. SEWER CLEAN-OUT
NOT TO SCALE



CURB AND GUTTER
NOT TO SCALE



CURB/SIDEWALK/DRIVEWAY CUT
NOT TO SCALE

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APPROVED
JUN 22 2012
BY *P. E.*
CITY OF FERDALE

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PROJECT #110011.LDP

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June 13, 12

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