

10 SOUTH AUBURN - KENNEDHCK, WA 98336 (508) 562-2200 - FAX (508) 566-2867

**ASSOCIATES** 

2010

Villages at Garrison Creek

CREA, OWEST, CNG, IN SAME TRENCH

4" SS SERVICE UTILITY LINE

HB" CATCH BASIN

STORM DRAIN MANHOLE

RIGATION METER

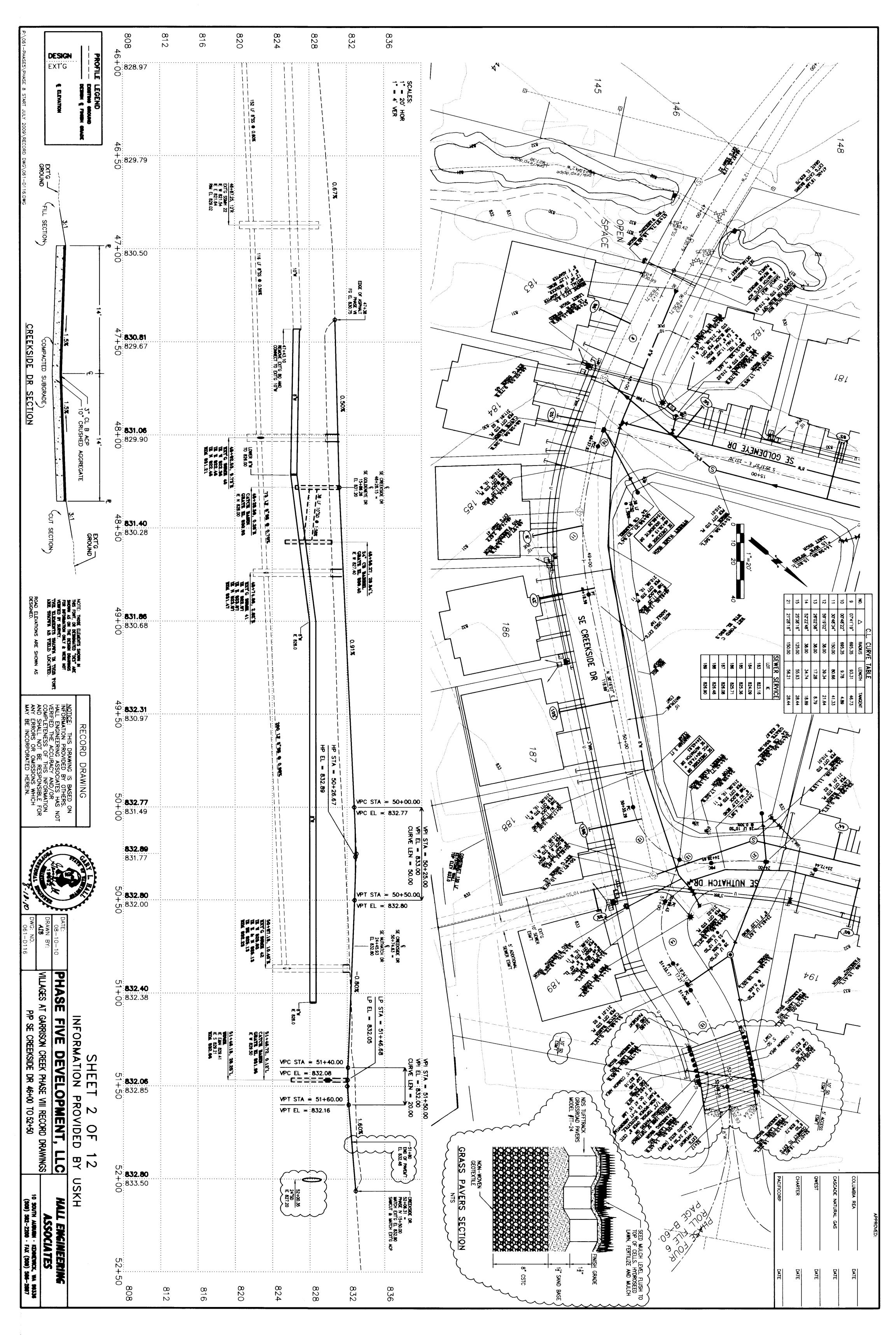
LOAD BREAK JUNCTION BOX

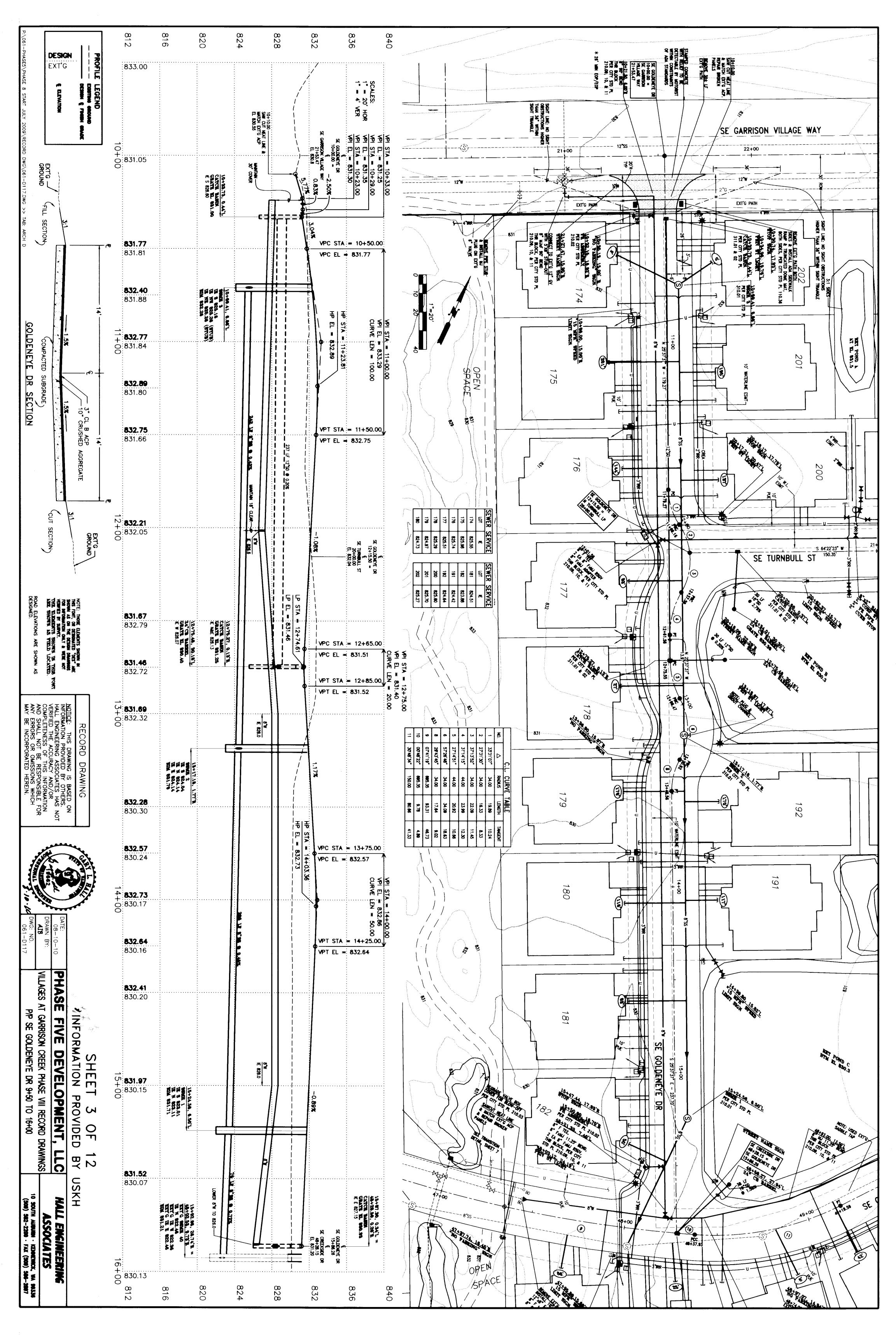
S/W TEST PIT LOCATION

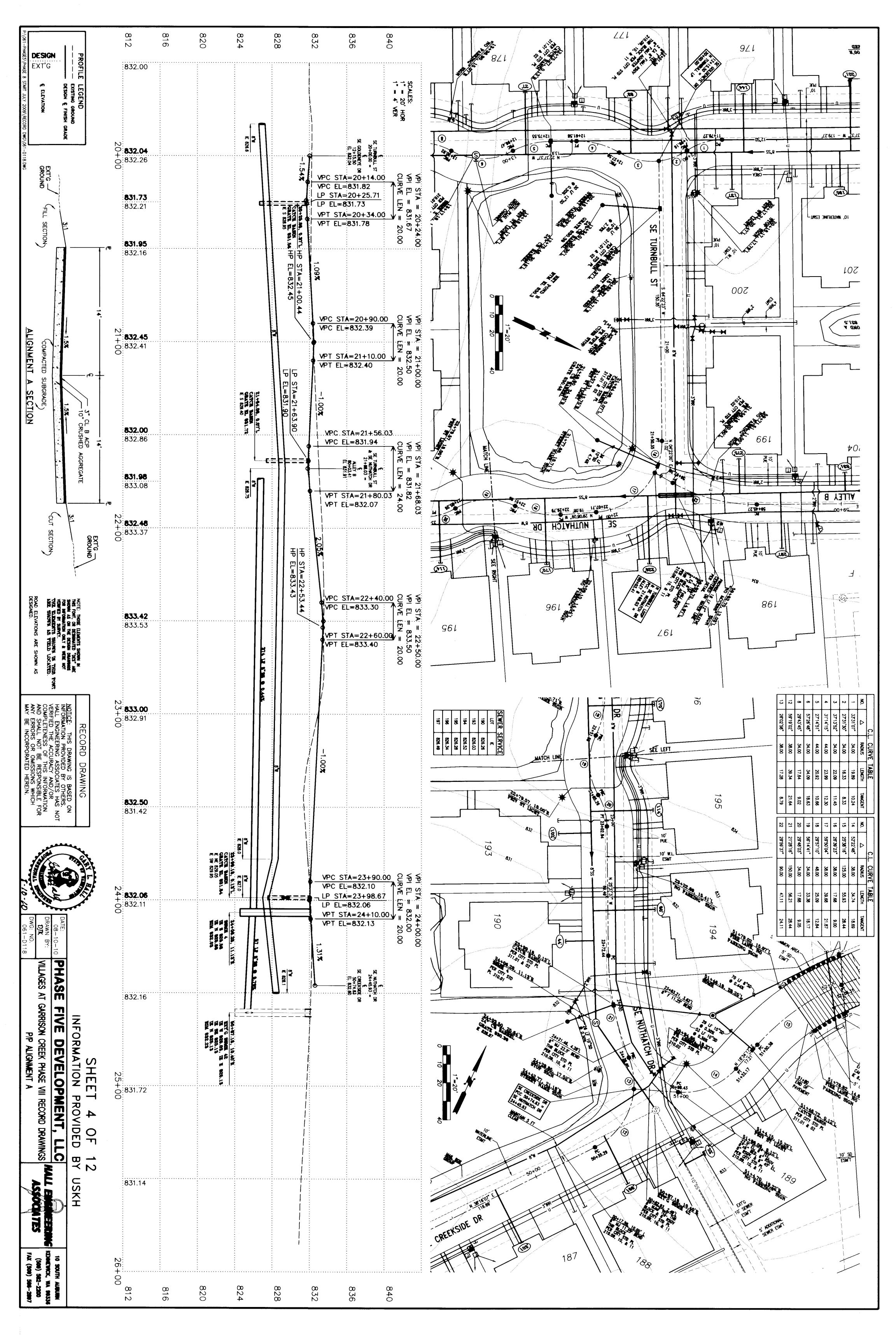
GROUND ELEV CONTOUR ROW / PROP LINE

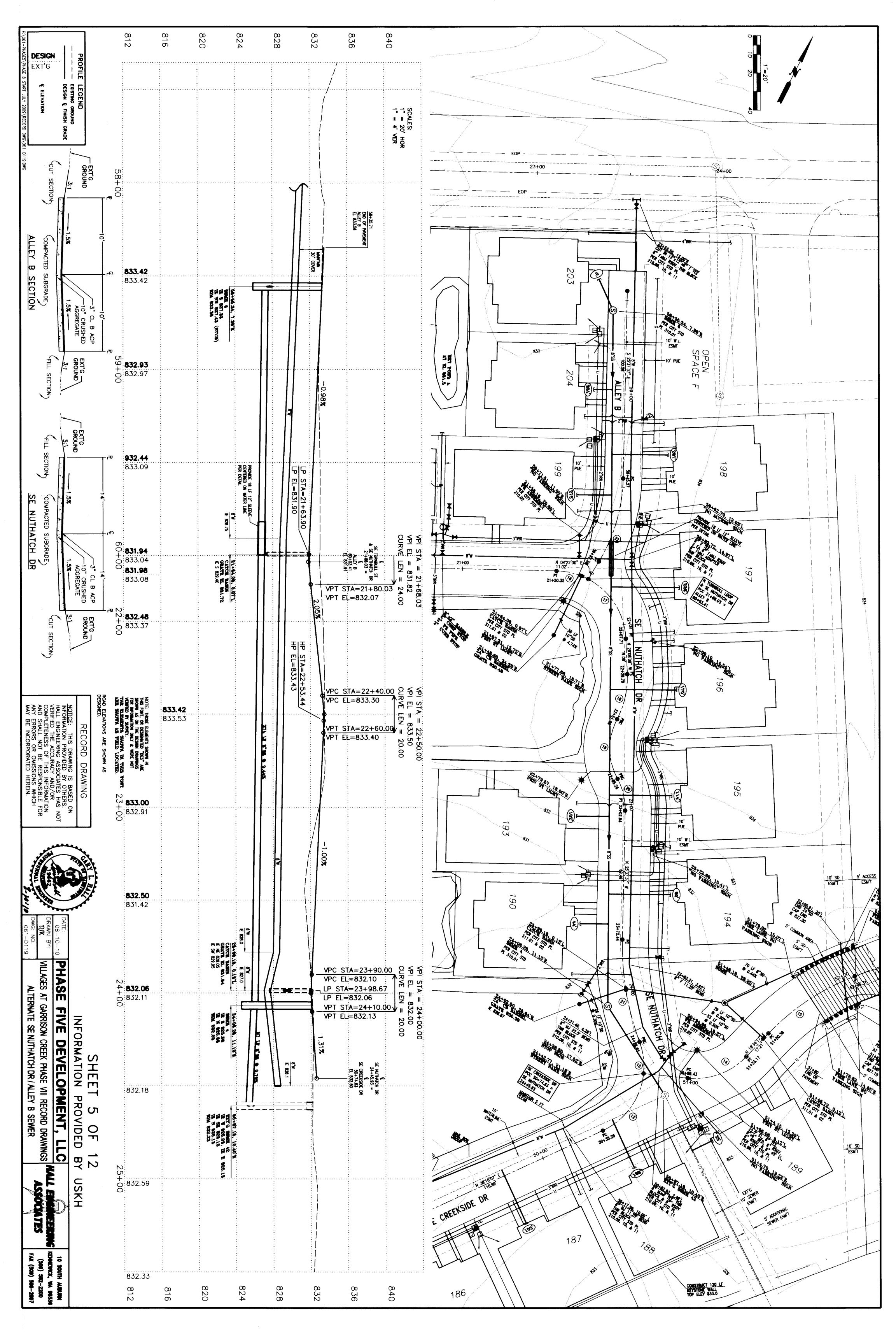
EDGE OF PAVEMENT

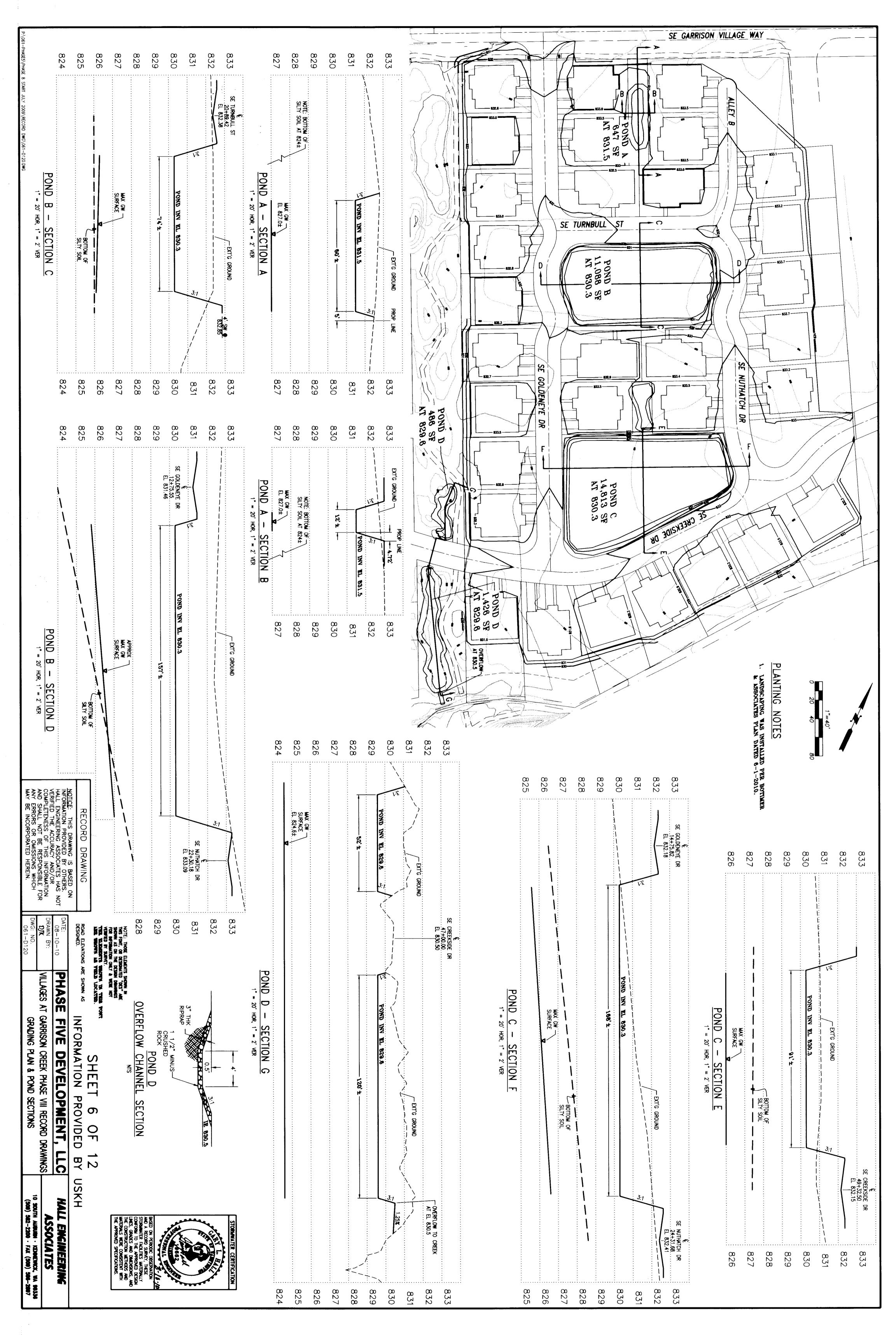
FORT WALLA WALLA PARK

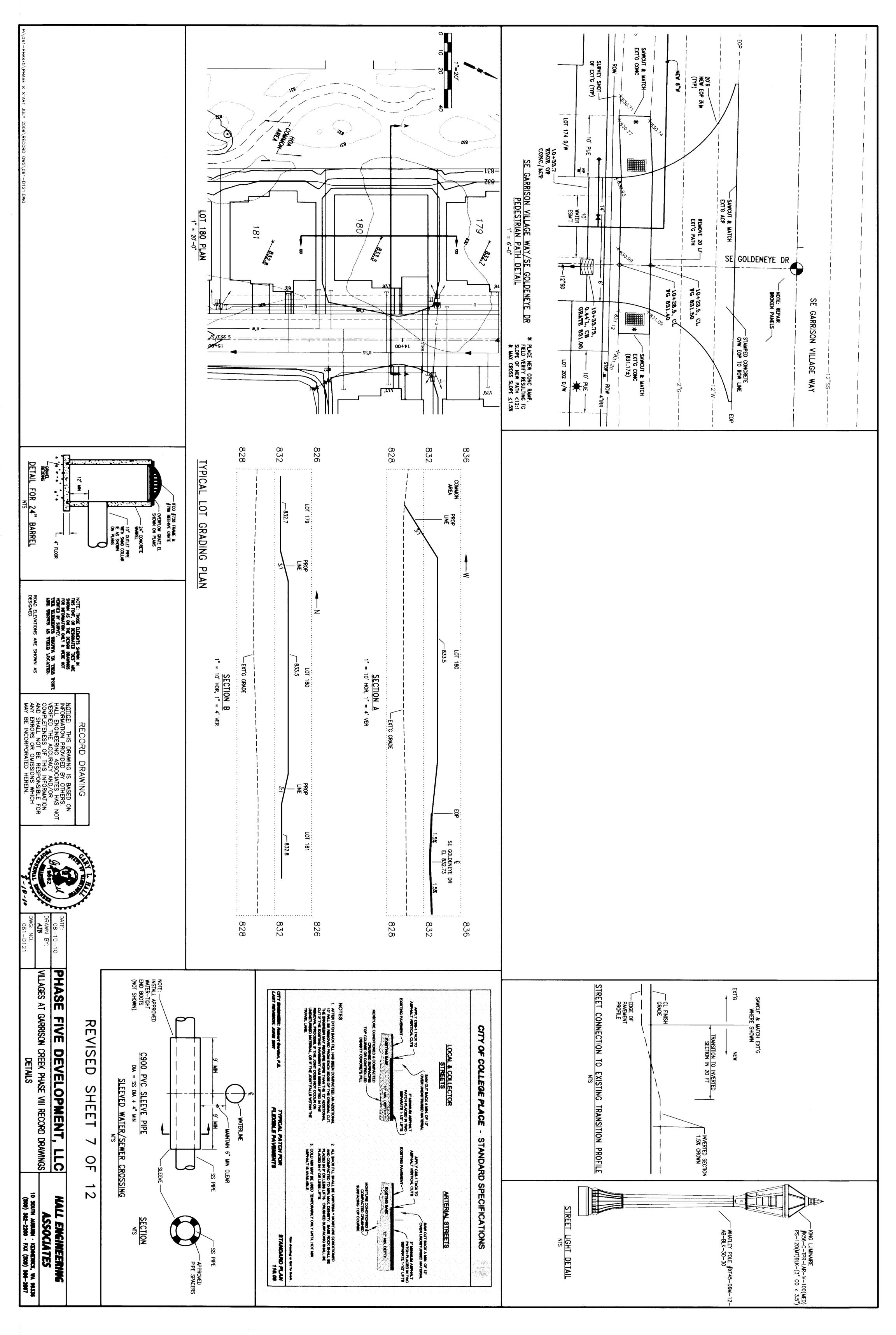


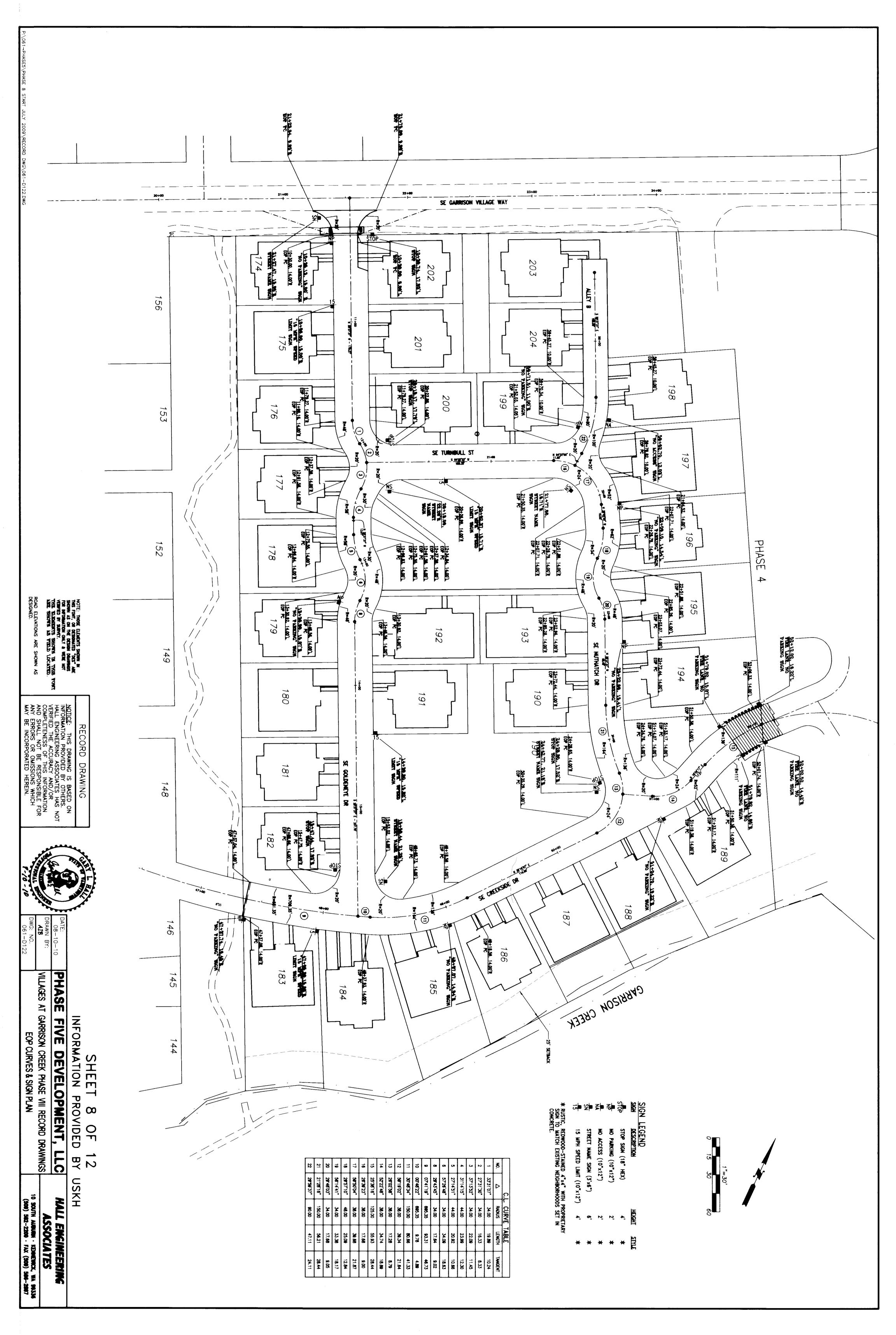


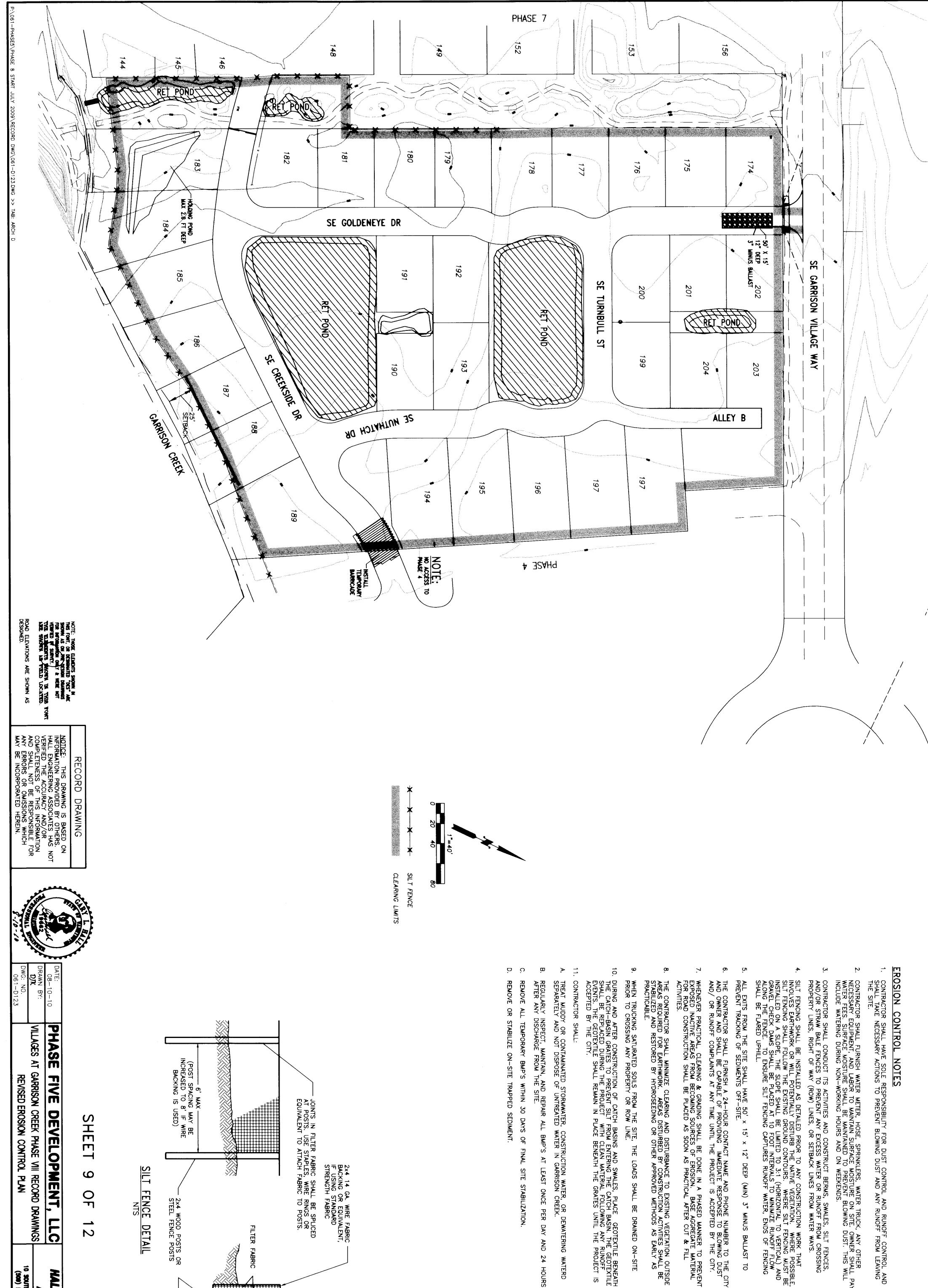












FENCE

DETAIL

2x4 WOOD POSTS OR STEEL FENCE POSTS

SHEET

9

9

12

JOINTS IN FILTER FABRIC SHALL BE SPLICED AT POSTS. USE STAPLES, WIRE RINGS OR EQUIVALENT TO ATTACH FABRIC TO POSTS.

FILTER FABRIC

2x4 14 GA. WIRE FABRIC -BACKING OR EQUIVALENT, IF USING STANDARD STRENGTH FABRIC

PHASE FIVE DEVELOPMENT, VILLAGES AT GARRISON CREEK PHASE VIII RECORD DRAWINGS REVISED EROSION CONTROL PLAN 

10 SOUTH ALBUMN - KENNEWCK, WA 98334 (508) 582-2208 - FAX (508) 586-2887 **ASSOCIATES** 

HALL ENGINEERING

### And the second

- CONTRACTOR SHALL HAVE SOLE RESPONSIBILITY FOR DUST CONTROL AND RUNOFF CONTROL AND SHALL TAKE NECESSARY ACTIONS TO PREVENT BLOWING DUST AND ANY RUNOFF FROM LEAVING THE SITE.
- CONTRACTOR SHALL FURNISH WATER METER, HOSE, SPRINKLERS, WATER TRUCK, ANY OTHER NECESSARY EQUIPMENT, AND LABOR TO MAINTAIN SURFACE MOISTURE ON SITE. OWNER SHALL PAY WATER FEES. SURFACE MOISTURE SHALL BE MAINTAINED TO PREVENT BLOWING DUST. THIS WILL NCLUDE WATERING DURING NON—WORKING HOURS AND ON WEEKENDS.
- CONTRACTOR SHALL CONDUCT ITS ACTIVITIES AND CONSTRUCT BERMS, SWALES, SILT FENCES, AND/OR STRAW BALE FENCES TO PREVENT ANY EXCESS WATER OR RUNOFF FROM CROSSING PROPERTY LINES, RIGHT OF WAY (ROW) LINES, OR SETBACK LINES FROM WATER WAYS.

- ALL EXITS FROM THE SITE SHALL HAVE 50'  $\times$  15'  $\times$  12" DEEP (MIN) 3" MINUS BALLAST TO PREVENT TRACKING OF SEDIMENTS OFF—SITE.
- THE CONTRACTOR SHALL FURNISH A 24—HOUR CONTACT NAME AND PHONE NUMBER TO THE CITY AND OWNER AND SHALL BE CAPABLE OF PROVIDING IMMEDIATE RESPONSE TO BLOWING DUST AND/ OR RUNOFF COMPLAINTS AT ANY TIME UNTIL THE PROJECT IS ACCEPTED BY THE CITY.
- THE CONTRACTOR SHALL MINIMIZE CLEARING AND DISTURBANCE TO EXISTING VEGETATION OUTSIDE AREAS REQUIRED FOR EARTHWORK. AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE STABILIZED AND RESTORED BY HYDROSEEDING OR OTHER APPROVED METHODS AS EARLY AS PRACTICABLE.
- WHEN TRUCKING SATURATED SOILS FROM THE SITE, THE LOADS SHALL BE DRAINED ON-SITE PRIOR TO CROSSING ANY PROPERTY OR ROW LINE.
- DURING AND AFTER CONSTRUCTION OF CATCH BASINS AND SWALES, PLACE GEOTEXTILE BENEATH THE CATCH—BASIN GRATES TO PREVENT SILT FROM ENTERING THE CATCH BASIN. THE GEOTEXTILE SHALL BE REPLACED DURING THE PROJECT WITH CLEAN MATERIAL FOLLOWING ANY RUNOFF EVENTS. THE GEOTEXTILE SHALL REMAIN IN PLACE BENEATH THE GRATES UNTIL THE PROJECT IS ACCEPTED BY THE CITY.
- TREAT MUDDY OR CONTAMINATED STORMWATER, CONSTRUCTION WATER, OR DEWATERING WATERD SEPARATELY AND NOT DISPOSE OF UNTREATED WATER IN GARRISON CREEK.
- TEMPORARY BMP'S WITHIN 30 DAYS OF FINAL SITE STABILIZATION.

### GENERAL CONSTRUCTION NOTES

### STANDARD PLAN 010.00

- THIS PROJECT SHALL BE CONSTRUCTED PER THE LATEST EDITION OF THE WASHINGTON DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION (SSRB&MC) AS AMENDED AND SUPPLEMENTED BY THE APWA SUPPLEMENT, THE CITY OF COLLEGE PLACE STANDARD SPECIFICATIONS AND THESE DRAWINGS. WORK SHALL CONFORM TO FEDERAL, STATE AND LOCAL CODES.
- THE OWNER & CONTRACTOR SHALL PROVIDE PROPER SAFETY MEASURES IN ACCORDANCE WITH STATE AND FEDERAL SAFETY LAWS (WISHA, OSHA) AND SHALL PROTECT EMPLOYEES AND THE PUBLIC. FAILURE TO COMPLY WITH STATE AND FEDERAL SAFETY LAWS MAY RESULT IN FINES AND/OR CLOSURE OF THE PROJECT.
- THE CONTRACTOR SHALL HAVE A RESPONSIBLE PARTY WHO SHALL HAVE THE AUTHORITY REPRESENT AND ACT FOR THE CONTRACTOR AT THE JOB SITE DURING ALL WORKING HOURS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE A COPY OF THESE APPROVED PLANS STAMPED "FOR CONSTRUCTION" AND SIGNED BY THE CITY ENGINEER ON THE CONSTRUCTION SITE AT ALL TIMES. ಠ
- THE CONTRACTOR SHALL INVESTIGATE THE SITE AND VERIFY ALL CONDITIONS AND DIMENSIONS OF THE PROJECT AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCY IN THE CONTRACT DOCUMENTS REQUIRING MODIFICATION PRIOR TO PROCEEDING.
- ANY CHANGES TO THE DESIGN MUST BE APPROVED BY THE CITY OF COLLEGE PLACE (ENGINEER OR HIS DESIGNEE AND THE OWNER PRIOR TO IMPLEMENTING/CONSTRUCTING CHANGE.
- THE CONTRACTOR SHALL TAKE PREVENTATIVE MEASURES NECESSARY TO PROTECT EXISTING MPROVEMENTS. THE CONTRACTOR SHALL, AT NO ADDITIONAL COST TO THE OWNER OR THE CITY OF COLLEGE PLACE, REPLACE ANY IMPROVEMENTS SO DAMAGED.
- THE LOCATIONS OF EXISTING UTILITIES ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR TO EXISTING UTILITIES AS WELL AS DAMAGES OCCURRING AS A RESULT OF DAMAGES TO UTILITIES. PRIOR TO DIGGING, VERIFY LOCATION AND DEPTH OF UTILITIES AND ANY OTHER UNDERGROUND INTERFERENCE. CALL 1-800-425-5555 TWO BUSINESS DAYS BEFORE YOU DIG. IF THE CONTRACTOR DISCOVERS ANY DISCREPANCIES BETWEEN THE PLANS AND THE CONDITIONS ENCOUNTERED, THE CONTACTOR SHALL IMMEDIATELY NOTIFY THE DESIGN ENGINEER AND THE CITY OF COLLEGE PLACE PUBLIC WORKS DIRECTOR OR CITY ENGINEER.
- THE OWNER AND CONTRACTOR SHALL OBTAIN A CONSTRUCTION STORMWATER GENERAL PERMIT FROM THE DEPARTMENT OF ECOLOGY AND SHALL COMPLY WITH THE NPDES GCP (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL CONSTRUCTION PERMIT). THIS INCLUDES USING BEST MANAGEMENT PRACTICES (BMP'S) TO PREVENT DISCHARGE OF STORM WATER AND SEDIMENTATION FROM THIS SITE DURING CONSTRUCTION. THE IMPLEMENTATION, CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE BMP'S IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED.
- THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS (PERMIT OF ENTRY, GRADING, SEWER, WATER, ETC) BEFORE COMMENCING WORK. WORK IN THE RIGHT-OF-WAY OR WORK IMPACTING CITY EASEMENTS REQUIRES A RIGHT-OF-WAY OR ENTRY PERMIT FROM THE JURISDICTION OWNING THE RIGHT-OF-WAY.
- 5 THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE CITY FOR APPROVAL PRIOR TO BEGINNING WORK IN THE RIGHT-OF-WAY. TEMPORARY TRAFFIC CONTROL SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THE CONTRACTOR SHALL COORDINATE THE WORK SCHEDULE SO AS TO HAVE A MINIMUM IMPACT TO EXISTING TRAFFIC. PROVISION SHALL BE MADE FOR ACCESS BY RESIDENTS IMPACTED BY PROJECT AND EMERGENCY AND CARBAGE COLLECTION VEHICLE ACCESS SHALL BE PROVIDED AT ALL TIMES.
- JALL BE RESPONSIBLE TO PROTECT FUTURE LAND CORNERS.

  WARKERS, BENCHMARKS ETC. SHALL BE REPLACED AT THE
  USING THE SERVICES OF A REGISTERED SURVEYOR LICENSED IN THE
- THE CONTRACTOR SHALL I DISTURBED PROPERTY MAI CONTRACTOR'S COST USIN STATE OF WASHINGTON. AMERICAN DISABILITY ACT REQUIREMENTS SHALL BE OBSERVED WHETHER OR NOT THEY ARE SPECIFICALLY CALLED OUT ON PLANS OR DETAILS.
- ij WHERE CONNECTIONS REQUIRE "FIELD VERIFICATION", CONNECTION POINTS WILL BE EXPOSED BY THE CONTRACTOR AND FITTINGS VERIFIED 48 HOURS PRIOR TO DISTRIBUTING SHUT-DOWN NOTICES.
- BACKFILLING OF ALL MAINS, SERVICES, APPURTENANCES, AND COMPACTED LIFTS SHALL BE OBSERVED BY THE CITY OF COLLEGE PLACE. OBSERVATION OF SUCH WORK SHALL NOT RELIEVE THE CONTRACTOR FOR CORRECTION OF ANY DEFICIENCIES AND/OR FAILURES AS DETERMINED BY SUBSEQUENT TESTING AND INSPECTIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY FOR THE REQUIRED OBSERVATIONS AT LEAST 24 HOURS PRIOR TO INSPECTION. SPECIAL INSPECTION AND CERTIFICATION OF ADEQUACY BY A PROFESSIONAL ENGINEER IS REQUIRED FOR PRESSURE TESTING, FLUSHING, BACTERIA TEST, AND START UP. 1) A TEST IN EACH LANE OF EVERY STREET "LEG" OF A DEVELOPMENT WHERE A CUL—DE—SAC CONSTITUTES AN ADDITIONAL LEG BEYOND THE STREET TO THE CUL—DE—SAC LOCATION OF CORES SHALL ALTERNATE BETWEEN EACH SIDE OF THE STREET SECTION.
- 2) A TEST FOR EVERY 500' IN EACH LANE WHERE THE LENGTH IS DETERMINED BY THE SUM OF ALL STREET LENGTHS COMPUTED THROUGH EACH INTERSECTION TO THE FURTHEST EXTENT OF PAVEMENT WHERE THE LENGTHS OF ALL INTERSECTING LINES THROUGH AN INTERSECTION SHALL BE INCLUDED.
- IN ADDITION TO THE ABOVE REQUIREMENTS, A MINIMUM OF ONE DENSITY TEST SHALL ALSO BE PERFORMED AT TWO FEET BELOW AND AT FINISHED GRADE OF BACKFILL FOR EACH STREET AND REPAIR IN EXISTING CITY STREETS OR PRIVATE ROADS.

17.

THE ENGINEER OF RECORD SHALL PROVIDE THE CITY OF COLLEGE PLACE WITH STAMPED CONFIRMATION THAT SWALES AND DETENTION BASINS WERE CONSTRUCTED TO PLAN BASED ON DATA PROVIDED BY REGISTERED SURVEYOR OBTAINED AFTER CONSTRUCTION AT OWNERS EXPENSE.

UPON COMPLETION AND PRIOR TO FINAL APPROVAL OF THE WORK, THE OWNER OR HIS AGENT SHALL PROVIDE RECORD DRAWINGS TO THE ENGINEER AS TWO MYLARS, ONE PAPER COPY, AND TWO ELECTRONIC COPIES (AUTOCAD & PDF).

- CURB RAMPS SHALL NOT BE PLACED INTEGRAL WITH THE SIDEWALK OR CURB BE ISOLATED WITH EXPANSION JOINT MATERIAL. AND SHALL

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- SIDEWALK WIDTH SHALL BE NO LESS THAN 5'-O". WIDER SIDEWALKS SHALL EON PLANS & DOCUMENTS AND ARE SUBJECT TO APPROVAL BY THE CITY ENGINE WIDTH REQUIRED FOR CURB LINE SIDEWALKS IS SUCH THAT THE 12:1 R. CANNOT BE ACHIEVED, THE BACK OT THE SIDEWALK SHALL BE GRADUALLY LOCANNOT RAMP SLOPE CAN BE ACHIEVED OVER THE FULL WIDTH OF THE RAMP SLOPE CAN BE ACHIEVED OVER THE FULL WIDTH OF THE RAMP SLOPE CAN BE ACHIEVED OVER THE FULL WIDTH OF THE RAMP SLOPE CAN BE ACHIEVED OVER THE FULL WIDTH OF THE RAMP SLOPE CAN BE ACHIEVED OVER THE FULL WIDTH OF THE RAMP SLOPE CAN BE ACHIEVED OVER THE FULL WIDTH OF THE RAMP SLOPE CAN BE ACHIEVED OVER THE FULL WIDTH OF THE RAMP SLOPE CAN BE ACHIEVED OVER THE FULL WIDTH OF THE RAMP SLOPE CAN BE ACHIEVED OVER THE FULL WIDTH OF THE RAMP SLOPE CAN BE ACHIEVED OVER THE FULL WIDTH OF THE RAMP SLOPE CAN BE ACHIEVED OVER THE FULL WIDTH OF THE RAMP SLOPE CAN BE ACHIEVED OVER THE FULL WIDTH OF THE RAMP SLOPE CAN BE ACHIEVED OVER THE FULL WIDTH OF THE RAMP SLOPE CAN BE ACHIEVED OVER THE FULL WIDTH OF THE RAMP SLOPE CAN BE ACHIEVED OVER THE FULL WIDTH OF THE RAMP SLOPE CAN BE ACHIEVED OVER THE FULL WIDTH OF THE RAMP SLOPE CAN BE ACHIEVED OVER THE FULL WIDTH OF THE RAMP SLOPE CAN BE ACHIEVED OVER THE FULL WIDTH OF THE RAMP SLOPE CAN BE ACHIEVED OVER THE FULL WIDTH OF THE FULL WIDTH OVER THE WID SPECIFIED
  NEEER. WHEN
  MP SLOPE
  VERED SO
- YELLOW TRUNCATED DOME WARNING PADS SHALL BE PLACED ON BOTH SIDES RAMPS, AT ENTRIES TO TRAVELED WAYS AND AT ANY GRADE CHANGE OR OBS THE SIDEWALK. THEY SHALL BE CONSTRUCTED AS PER SHOWN IN STANDARD 110.36. THE PADS SHALL EXTEND THE FULL WIDTH OF THE SIDEWALK AND SILESS THAN 1'-6" OR NO MORE THAN 3'-0" WIDE AS SHOWN IN STANDARD F-110.36. OF CURB . BE NO IS 110.30
- DRIVEWAY/ALLEY APPROACH LIP SHALL BE NO LESS THAN 1\*. WHEELCHAIR R SHALL BE FLUSH. AMP LIP

### STREET CONSTRUCTION NOTES

GENERAL

# STANDARD PLAN 110.00

- TRENCH BACKFILL ABOVE PIPE BEDDING MAY BE SUITABLE NATIVE MATERIAL. MATERIAL, NOR MUDDY, UNSTABLE MATERIAL SHALL BE ALLOWED FOR BACKFIL COMPACTION SHALL BE VERIFIED BY A QUALIFIED TESTING AGENCY. STREET BASE ROCK LIFTS SHALL BE IMPORTED CRUSHED ROCK, COMPACTED RELATIVE DENSITY WITH A VIBRATING COMPACTION SLED, UPRIGHT HAMMERING HOEPACK, OR VIBRATORY COMPACTION ROLLER. TO A 95% COMPACTOR, NO WATERY
- STREET BASE ROCK LIFTS SHALL BE NO MORE THEN 12" IN HEIGHT IN ORDER TO ASSURE PROPER COMPACTION. APPROPRIATE MOISTURE SHALL BE ADDED TO THE ROCK FOR OPTIMIZING COMPACTION. ROCK IS NOT TO BE COMPACTED OR GRADED DRY. 17.
- THE LAST OR TOP LIFT, PRIOR TO PAVING THE CUT, MAY EITHER BE COMPAC ROCK OR A CONTROLLED DENSITY CONCRETE FILL. CONTROLLED DENSITY CONSHALL BE APPROVED BY THE CITY ENGINEER PRIOR TO USE. NCRETE FILL
- FINAL TOP COURSE ON CONCRETE PAVED STREETS SHALL BE NO LESS THAN 8" IN DEPTH
- A COAT OF CSS-1 TACK SHALL BE APPLIED TO THE ADJOINING EDGES OF A STREET CUTS. THE ONLY EXCEPTION TO THIS IS WHERE CONCRETE IS BEING RESURFACING MATERIAL. USED AS THE
- ASPHALT FINAL TOP COURSE LIFTS SHALL BE NO LESS THEN 3" THICK, PLACED IN TWO SEPARATE 1-1/2" COMPACTED LIFTS AND SHALL SLOPE FROM CENTERLINE TO THE EDGE OF THE STREET AT A 2% SLOPE. THE <u>ONLY</u> EXCEPTION IN PAVEMENT THICKNESS IS SURFACE REPLACEMENT FOR LOW GRADE FLEXIBLE PAVEMENT WHICH ONLY REQUIRES A MINIMUM 2" LIFT. (SEE STANDARD PLAN 110.10)
- PRIOR TO FINAL ACCEPTANCE OF STREET IMPROVEMENTS, AT THE OWNER'S EXFINDEPENDENT TEST RESULTS FOR THE FOLLOWING ITEMS SHALL BE SUBMITTED CITY OF COLLEGE PLACE PUBLIC WORKS DEPARTMENT. THE CITY OF COLLEGE I BE NOTIFIED 48 HOURS IN ADVANCE OF ANY SUCH TEST TO ALLOW ONSITE OF AND SHALL RESERVE THE RIGHT TO REQUIRE ADDITIONAL TESTS AS DEEMED NITHE CITY OF COLLEGE PLACE CITY ENGINEER.
- SUB GRADE DENSITY: A MINIMUM OF ONE IN-PLACE DENSITY TEST PER 100 FEET PER LANE PER LIFT WITH NOT LESS THAN FIVE TOTAL TESTS PER LIFT IN FILL AREAS GREATER THAN 1 FOOT IN DEPTH AND A MINIMUM OF ONE INPLACE DENSITY TEST PER 100 FEET PER LANE AT THE FINISHED SUBGRADE ELEVATION WITH NOT LESS THAN FIVE TOTAL TESTS. LOCATIONS SHALL BE DETERMINED AS PER THE WSDOT CONSTRUCTION MANUAL MINIMUM DENSITY SHALL BE 95% OF THE MAXIMUM DENSITY AND + 2% OF THE OPTIMUM MOISTURE AS DETERMINED BY THE APPROPRIATE WSDOT TEST METHOD.
- CRUSHED SURFACING BASE COURSE: A MINIMUM OF ONE IN-PLACE DENSITY 100 FEET PER 12 INCHES OR FRACTION THEREOF OF COMPACTED MATERIAL LESS THAN FIVE TOTAL TESTS. LOCATIONS SHALL BE DETERMINED AS PER THE CONSTRUCTION MANUAL MINIMUM DENSITY SHALL BE 95% OF THE WSDOT 60 METHOD.
- CRUSHED SURFACING TOP COURSE: A MINIMUM OF ONE IN-PLACE DENSITY FEET PER 6 INCHES OR FRACTION THEREOF OF COMPACTED MATERIAL WITH N THAN FIVE TOTAL TESTS. LOCATIONS SHALL BE DETERMINED AS PER THE WSC CONSTRUCTION MANUAL. MINIMUM DENSITY SHALL BE 95% OF THE APPLICABITEST METHOD. DOT BLE WSDOT TEST PER 100 NOT LESS
- Ö CRUSHED SURFACING BASE COURSE AND TOP COURSE GRADATION ANALYSES: OF ONE TOP AND ONE BASE COURSE GRADATION ANALYSES TESTS FOR THE ONE PER DAY PER BASE AND TOP COURSE OF GRADING WORK, WHICHEVER I LOCATIONS SHALL BE RANDOM. BASE AND TOP COURSE GRADATION SHALL COWSDOT STANDARD SPECIFICATIONS SECTION 9-03.9(3). PROJECT OR IS MORE.
  ONFORM TO
- ASPHALI CONCRETE PAYEMENT ACCEPTANCE: A MINIMUM OF ONE ASPHALTIC CONTENT, GRADATION, AND THEORETICAL MAXIMUM DENSITY (RICE VALUE) TEST PAVING UP TO 400 TONS OF ASPHALT. THEREAFTER, TESTING FREQUENCY SICONFORM TO SSRBAMC STANDARDS. LOCATIONS SHALL BE DETERMINED AS WSDOT CONSTRUCTION MANUAL. PER THE CONCRETE
- ASPHALT CONCRETE PAVEMENT (ACP) IN-PLACE DENSITY: A MINIMUM OF FIVE IN-PLACE DENSITY TESTS PER 400 TON, OR A FRACTION THEREOF AT FINISHED GRADE ACP. MINIMUM DENSITY SHALL BE 91% OF THE MAXIMUM THEORETICAL DENSITY (RICE VALUE). TEST LOCATIONS SHALL BE AS DETERMINED BY WSDOT CONSTRUCTION MANUAL.
- ASPHALT CONCRETE PAYEMENT (ACP) THICKNESS: CORES SHALL BE TAKEN LOCATIONS. CORES IN THE PAVEMENT SHALL BE BACKFILLED WITH CONTROLLI FILL PER WSDOT STANDARD SPECIFICATIONS SECTION 2-09.3(1)E. THE MINIMUM OF CORES SHALL BE THE GREATER OF: THE MINIMUM NUMBER OF REQUIRED SAMPLES SHALL BE THE GREATER OF THE FOLLOWING: AT RANDOM ED DENSITY UM NUMBER ) CORE

- CURB RAMP TRANSITIONS SECTIONS SHALL BE NO STEEPER THAN A 12:1 SLUTHE AMERICANS WITH DISABILITIES ACT (A.D.A.) PE AS PER
- CURB RAMP SHALL BE PLACED TO FACILITATE ALIGNMENT OF THE CROSSWALK

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- APPROACH TRANSITION SECTIONS (FLARES) SHALL BE NO LESS THAN 6'-0" IN WIDTH OR 12:1 MAXIMUM SLOPE, AS SHOWN IN STANDARD PLAN 110.13, UNLESS APPROVED BY THE CITY ENGINEER OR HIS DESIGNEE.
- ALL DRIVEWAY & ALLEY APPROACHES SHALL BE NO LESS THAN 12'-0" IN MORE THAN 20'-0" IN WIDTH UNLESS APPROVED BY THE CITY ENGINEER. ON DNA HTO

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## GENERAL STREET CONSTRUCTION NOTES cont

- COMMERCIAL OR HEAVY VEHICLE LOAD DRIVEWAY AND ALLEY APPROACHES SHALL HAVE REINFORCEMENT MATERIAL PLACED WITHIN THE CURB/GUTTER & AND SIDEWALK AS SHOWN IN STANDARD PLAN 110.15 AND IN THE FOLLOWING MANNER:
- CURB/GUTTER: 3-#4 REINFORCEMENT BARS PLACED PARALLEL TO THE STREET WITH #4 CROSS TIES @ 12" ON CENTER.
- ALL SIDEWALK EDGES SHALL HAVE A 3/4" RADIUS SIDEWALK: #4 REINFORCEMENT BARS PLACED • 12" ON CENTER EACH WAY.
- ALL RETROFIT CURB, GUTTER & SIDEWALK WORK SHALL BE SAW CUT SMOOTHLY EVENLY AT THE ADJOINING EDGES. COMPLETELY REMOVE THE WHOLE CURB AND CURB, GUTTER, DRIVEWAY & GUTTER SHALL NOT BE POURED AS ONE SECTION. GUTTER.
- FELT EXPANSION MATERIAL SHALL BE PLACED AT JOINTS EVERY 25' PRIOR TO AND AFTER THERE IS ANY CHANGE IN DIRECTION, PROFILE, OR OTHER SIGNIFICANT CHANGE IN THE DESIGN OR CONFIGURATION OF THE SIDEWALK AND/OR CURB OCCURS. EXAMPLES OF THIS ARE AS FOLLOWS:
- DRIVEWAY/ALLEY APPROACHES
- -OBSTRUCTIONS SUCH AS MANHOLES, WATER VALVE BOXES, POWER POLES, PHONE PEDESTALS, BEFORE AND AFTER ANY CHANGE IN DIRECTION SUCH AS SWEEPS OR CORNERS
- CURB, GUTTER AND SIDEWALKS SHALL BE POURED AS SEPARATE UNITS \*\*\*MONOLITHICALLY CONSTRUCED WORK SHALL NOT BE ALLOWED\*\*\*

WHEEL CHAIR RAMPS

# WATER UTILITY SYSTEM NOTES

### STANDARD PLAN 210.00

- ALL VALVE OPERATIONS AND OTHER ACTIVITIES IMPACTING THE WATER DISTRIBUTION SYSTEM SHALL BE PERFORMED BY THE CITY OF COLLEGE PLACE PUBLIC WORKS. 24—HOUR NOTIFICATION OF ANY INTERRUPTION IN WATER SERVICE IS REQUIRED TO ALL AFFECTED CUSTOMERS.
- 2. DISINFECTION OF WATER LINES SHALL COMPLY WITH AWWA C651—DISINFECTING WATER MAINS, SSRB&MC, AND AT ENGINEER'S DIRECTION. ALL NEW FITTINGS AND EXISTING FITTINGS EXPOSED DURING INSTALLATION SHALL BE SWABBED WITH CHLORINE AND THE LINE CHLORINATED. ONCE THE LINE IS CHLORINATED, VALVES SHALL BE CLOSED AND THE LINE LEFT UNDISTURBED FOR 24 HOURS. THE LINE SHALL THEN BE THOROUGHLY FLUSHED AND WATER SAMPLES TAKEN BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE FOR APPROVAL BY THE LOCAL HEALTH AGENCY. WATER SHALL NOT BE FLUSHED TO NATURAL WATERS OR WATERWAY. SHOULD THE INITIAL TREATMENT RESULT IN AN UNSATISFACTORY BACTERIOLOGICAL TEST, THE ORIGINAL CHLORINATION PROCEDURE SHALL BE REPEATED BY THE CONTRACTOR UNTIL SATISFACTORY RESULTS ARE OBTAINED. TESTING AND SAMPLING SHALL TAKE PLACE AFTER ALL UNDERGROUND UTILITIES ARE INSTALLED AND COMPACTION OF THE ROADWAY SECTION IS COMPLETE.
- MINIMUM OF 4 BACTI TESTS ARE REQUIRED FOR THIS PROJECT.
- CONTRACTOR TO SUBMIT MAINLINE FLUSHING PLAN FOR APPROVAL OF CITY 5 DAYS MINIMUM PRIOR TO DISINFECTION OF MAINS TO ENSURE THAT CHLORINATED WATER IS NOT FLUSHED INTO GARRISON CREEK.
- NEW WATER LINE INSTALLATIONS SHALL BE PRESSURE TESTED AND MEET MINIMUM LEAKAGE STANDARDS IN CONFORMANCE WITH SSRBAMC.
- ALL FITTINGS SHALL BE MECHANICALLY RESTRAINED WITH MEG—A—LUGS AND FIELD—LOK GASKETS. ADDITIONALLY ALL JOINTS SHALL BE MECHANICALLY RESTRAINED WITH FIELD—LOK GASKETS AND MEG—A—LUGS.
- WATER MAINS AND SERVICE LINES SHALL BE INSTALLED AT A MINIMUM DEPTH OF 30" TO OUTSIDE CROWN OF PIPE.
- ALL FIRE HYDRANTS SHALL BE DRY BARREL, THREE PORT TYPE AND MEET ALL SPECIFICATIONS OUTLINED IN ARTICLE 200.02 OF THE CITY STANDARD SPECIFICATIONS.
- CLEAN, WASHED 1 1/2" DRAIN ROCK SHALL BE PLACED AROUND THE BASE OF ALL FIRE HYDRANTS AND BLOWOFF ASSEMBLIES AND SHALL BE COVERED WITH FILTER FABRIC.
- AN 8X8X4 INCH PRE-CAST 3000 PSI CONCRETE BLOCK SHALL BE PLACED BENEATH THE 3ASE OF ALL FIRE HYDRANTS. THIS IS TO ALLOW THE 1 ½" DRAIN ROCK TO COMPLETELY SURROUND THE BASE OF THE HYDRANT TO FACILITATE PROPER DRAINAGE.
- . 3000 PSI CONCRETE THRUST BLOCK SHALL BE PLACED BETWEEN FIRE HYDRANTS, ONTROL VALVES AND THE OPPOSING UNDISTURBED SOIL. SEE STANDARD PLAN 210.02, 10.09, 210.10, 210.11.
- SHEET OF 6 MIL. POLY SHEETING SHALL BE PLACED BETWEEN THE BASE OF ALL FIRE DRANTS, VALVES, PIPE FITTINGS AND INSTALLED THRUST BLOCKS. SEE STANDARD PLAN
- A STORTZ COUPLER SHALL BE PERMANENTLY MOUNTED TO THE 4 1/2" PORT ON ALL NEW TIRE HYDRANTS. EXISTING FIRE HYDRANTS WILL BE RETROFIT WITH A THREADED STORTZ NOAPTER.
- ALL GATE VALVES SHALL BE MUELLER A2360 RESILIENT WEDGE GATE VALVES WITH A 2" SQUARE WRENCH NUT OR AN APPROVED EQUAL.
- ALL GATE VALVE RISER PIPE SHALL BE 8" SDR-35 (UN-USED SEWER PIPE).
- ALL WATER MAINS SHALL BE A MINIMUM CLASS 50 DUCTILE IRON PIPE WITH A MINIMUM DIAMETER OF 8".
- CORPORATION STOPS SHALL BE MALE IRON PIPE THREAD (MIPT) X COPPER TUBE SIZE (CTS) COMPRESSION FITTINGS.
- SINGLE STRAP SADDLES SHALL BE ROMAC 101S. DOUBLE STRAP SADDLES SHALL BE ROMAC 202S OR APPROVED EQUAL.
- SERVICE LINES SHALL BE NO LESS THAN 1" DIAMETER TYPE K COPPER TUBE OR CT'S POLYETHYLENE. USE OF POLYETHYLENE PIPE SHALL REQUIRE INSPECTION AT THE TIME ALL COMPRESSION FITTINGS ARE INSTALLED. A STAINLESS STEEL INSERT WILL BE PLACED AT ALL COMPRESSION JOINTS. FAILURE TO OBTAIN AN INSPECTION WILL RESULT IN REMOVAL OF ALL OR A PORTION OF THE WORK IN ORDER TO FACILITATE A PROPER INSPECTION.
- WATER METERS SHALL BE SENSUS SRII TR-PL (TOUCH READ) METERS REGISTERING IN 1000 GALLONS. MINIMUM SIZE SHALL BE FULL 34" SHORT BODY FOR RESIDENTIAL WATER SERVICES.
- METER SETTERS SHALL BE EITHER FORD OR MUELLER PRODUCTS. MINIMUM SETTER FLOW SIZE SHALL BE 1". METER SETTERS SHALL BE EQUIPPED WITH AN ANGLE BALL VALVE, AN ANGEL CHECK VALVE & COMPRESSION ENDS (FORD QUICK JOINT OR MUELLER 110).
- A MINIMUM DEPTH OF 18" SHALL BE MAINTAINED BETWEEN THE TOP OF THE METER SETTER AND FINISHED GRADE.

BLOWOFF ENCLOSURE

1324 METER BOX

## WATER UTILITY

SYSTEM NOTES

- 22. TOTAL DEPTH OF WETER BOX BURY SHALL BE 30" MINIMUM. ALL METER BOXES USED SHALL BE CONSTRUCTED OF PLASTIC. THE SET SHALL CONSIST OF ONE 12" TOP SECTION AND ONE 18" BOTTOM SECTION. NO PIPE SLOTS ARE ALLOWED. METER BOXES SHALL BE MID—STATES 1324 OR APPROVED EQUAL FOR 1" OR SMALLER METERS. COVER/LIDS SHALL BE BROOKS #40 CONCRETE WITH A DROP IN LID WITH POT—LID READY COVER. METER BOXES FOR 1 ½" AND 2" METERS SHALL BE MID—STATES 1730. LID/COVER SHALL BE BROOKS #66 CONCRETE.
- THE MAIN GATE VALVE FOR THE BLOWOFF ASSEMBLY SHALL BE A MUELLER 2" A-2360 #10A.14 WITH A 2" SQUARE WRENCH NUT OR AN APPROVED EQUAL. SEE STANDARD PLAN 210.08.
- ALL WATER PIPE SHALL HAVE 6-IN. OF CRUSHED ROCK ABOVE AND ROCK UNDERNEATH FOR BEDDING. IN. OF CRUSHED

# STORM SEWER NOTES

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### STANDARD PLAN 310.00

SANITARY &

- ALL WANHOLES AND CURB INLETS SHALL BE PRE-CAST CONCRETE UNITS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
- MANHOLE PIPE CONNECTORS SHALL BE CAPABLE OF A 100 DEFLECTION IN ANY ONE DIRECTION AND SHALL BE INSTALLED AS REQUIRED BY THE MANUFACTURER. THE ALOK PIPE CONNECTOR, MANUFACTURED BY A-LOK PRODUCTS, AND PSX, MANUFACTURED BY PRESS-SEAL GASKETS CORP. ARE PRE-APPROVED. ALL OTHER CONNECTION SYSTEMS MUST BE APPROVED BY THE CITY ENGINEER PRIOR TO USE.
- CONNECTIONS, AND
- WANHOLES SHALL BE SET A MINIMUM OF 6 INCHES AND NOT MORE. THAN 12" BELOW REQUIRED.
- MANHOLE CONE SECTION SHALL BE ECCENTRIC.
- MASTIC JOINT SEAL SHALL BE PLACED AT EVERY JOINT BETWEEN BARREL SECTIONS, RISER SECTIONS, AND THE CAST IRON TOP. IN MANUFACTURING THE MANHOLES, THE CONTRACTOR IS ADVISED TO REVIEW THE DETAILS AS OUTLINED IN ANY TECHNICAL SPECIFICATIONS AND/OR PLANS, WHICH SHOW THE <u>SEWER</u> PIPE SLOPE CALCULATED TO THE CENTERLINE OF THE MANHOLE.
- MANHOLE RING & COVER SHALL BE INLAND FOUNDRY COMPANY INC. COVER LABELED "SEWER" OR APPROVED EQUAL. #817 WITH A SOLID
- CAST IRON MANHOLE RING AND COVER USED WITH THE SHALLOW TYPE MANHOLE DISPLAYED IN STANDARD PLAN 310.03 SHALL BE INLAND FOUNDRY COMPANY INC. #723-1 OR #723-2 WITH A SOLID 48" MAIN COVER AND A SOLID 24" LIMITED ACCESS COVER OR AN APPROVED EQUAL.
- WHEN USING THE SHALLOW TYPE MANHOLE REFERRED TO IN STANDARD PLAN 310.02, A MINIMUM SEPARATION BETWEEN THE FLAT TOP AND THE INSIDE BOTTOM SURFACE SHALL BE NO LESS THAN 2'-0". IN THE EVENT THE MINIMUM SEPARATION CANNOT BE MAINTAINED, THE SHALLOW TYPE MANHOLE REFERRED TO IN STANDARD PLAN 310.03 SHALL BE USED.
- PRE-CAST MANHOLE BASE SHALL BE NO LESS THAN 24" IN HEIGHT. SHALL BE MAINTAINED BETWEEN THE FLOW CHANNEL AND BASE ROCI SHALL BE PRE-CAST, CUSTOM UNITS FITTED WITH "A-LOK", PSX GAS "KOR-N-SEAL" BOOT IN PLACE AROUND ALL ATTACHED PIPE SECTION OUT" VS. A "PRE-CAST" HOLE MUST BE PLACED, A SAND COLLAR SEALED INSIDE AND OUTSIDE WITH NON-SHRINK, QUICK SET GROUT. . A THICKNESS OF 6"

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  SHALL BE PROPERLY
- BARREL SECTIONS SHALL BE NO LESS THAN 12" IN HEIGHT. BARREL 310.03 SHALLOW TYPE MANHOLE SHALL BE NO LESS THAN 12" AND IN HEIGHT. IF GRADE REQUIRES MORE THAN A 30" BARREL HEIGHT, A SECTION SHALL BE USED. THE BARREL SECTION FOR THE 310.02 SHASHALL BE NO LESS THE 24" AND NO MORE THAN 30" IN HEIGHT. IF MORE THAN A 30" BARREL HEIGHT, AN ECCENTRIC CONE SECTION SHADEN L SECTIONS FOR THE D NO MORE THAN 30".

  AN ECCENTRIC CONE SHALLOW TYPE MANHOLE IF GRADE REQUIRES SHALL BE USED.
- THE TOP SHOULD BE SATISFIED BY USING A 12" BAS APPROVED BY THE CITY ENGINEER. USE THE LEAST NITHE REQUIRED RISE. RISER RINGS SHALL BE PRE-CAY (HIGH DENSITY POLYETHYLENE) MANHOLE ADJUSTING ROR MASTIC SEALER APPLIED TO BOTH THE TOP AND E SHALL BE WATER TIGHT. 12" BARREL SECTION UNILESS OTHERWISE
  LEAST NUMBER OF RISER RINGS TO ACHIEVE
  PRE-CAST 3000 PSI CONCRETE OR HDPE
  USTING RINGS. ALL RISERS SHALL HAVE BUTYL
  OP AND BOTTOM SURFACES. RISER STACKS
- JANHOLE STEPS SHALL BE LANE BRAND, POLYPROPYLENE MANHOLE STEPS MODEL NO. 1—13938E OR AN APPROVED EQUAL.
- 6" MINIMUM OF COMPACTED ROCK SHALL BE PLACED UNDER THE MANHOLE BASE. SHOULD THE ENGINEER DETERMINE THE NATIVE MATERIAL IS UNSUITABLE FOR FOUNDATION, SPECIFIED MATERIAL (FOUNDATION MATERIAL CLASS B) SHALL BE IMPORTED AND PLACED AS OUTLINED IN WISDOT TECHNICAL SPECIFICATIONS 9-03.17 OR BY THE CITY ENGINEER.
- BEDDING FOR SEWER PIPE SHALL MEET THE STANDARDS AS OUTLINED IN CITY SPECIFICATION WANUAL SECTION 300.04 AND WSDOT STANDARD SPECIFICATIONS 9-03.16.

ALL NEW DRYWELLS MUST BE REGISTERED WITH THE UNDERGROUND INJECTION CONTROL PROGRAM AT DEPARTMENT OF ECOLOGY PRIOR TO USE (UIC PROGRAM, DEPARTMENT OF ECOLOGY, P.O. BOX 47600, OLYMPIA, WA 98504-7600. 'S ARE THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED.

- 21.
- PRE-CAST CURB INLET BOX SHALL BE NO LESS THAN 48" IN HEIGHT. A THICKNESS OF 6" SHALL BE MAINTAINED BETWEEN THE INSIDE BASE AND BASE ROCK. CURB INLET BOXES SHALL BE PRE-CAST CUSTOM UNITS CONSTRUCTED WITH A REINFORCEMENT CAGE AND PUNCH OUT SECTIONS NO LESS THAN 2" THICK ON ALL FOUR VERTICAL SIDES AS INDICATED IN STANDARD PLAN 311.02.
- 22. THE CAST IRON CURB INLET GRATE SHALL BE UNI-DIRECTIONAL OR BI-DIRECTIONAL GRATES ONLY, INLAND FOUNDRY COMPANY #571-3 OR #571-5 OR AN APPROVED EQUAL
- 23. THE DIRECTIONAL CONFIGURATION OF THE CURB INLET GRATE SHALL BE DETERMINED AT THE TIME OF DESIGN. CLOSE ATTENTION SHOULD BE PAID TO THIS DETAIL WHEN ORDERING THE GRATE FROM THE MANUFACTURER. REFER TO STANDARD PLAN 311.01.
- 24. THE CITY ENGINEER MAY REQUIRE THE APPLICATION OF AN AIR PRESSURE TEST ON ANY STORM SEWER PIPES. CLEANING AND REMOVAL OF ANY ROCK IS REQUIRED. AFTER CLEANING, THE CITY SHALL BE NOTIFIED FOR TV INSPECTION OF ALL STORM SEWER LINES. ANY WORK FAILING AN AIR TEST AND OR TV INSPECTION MUST BE REPAIRED AND RE—TESTED FOR CITY APPROVAL. THE CITY ENGINEER OR HIS DESIGNEE MUST WITNESS, VERIFY, AND RECORD ALL TESTS.
- THE CITY ENGINEER OR HIS DESIGNEE MAY IMPOSE OTHER DESIGN AND CONSTRUCTION CONSIDERATIONS, AS CIRCUMSTANCES REQUIRE.

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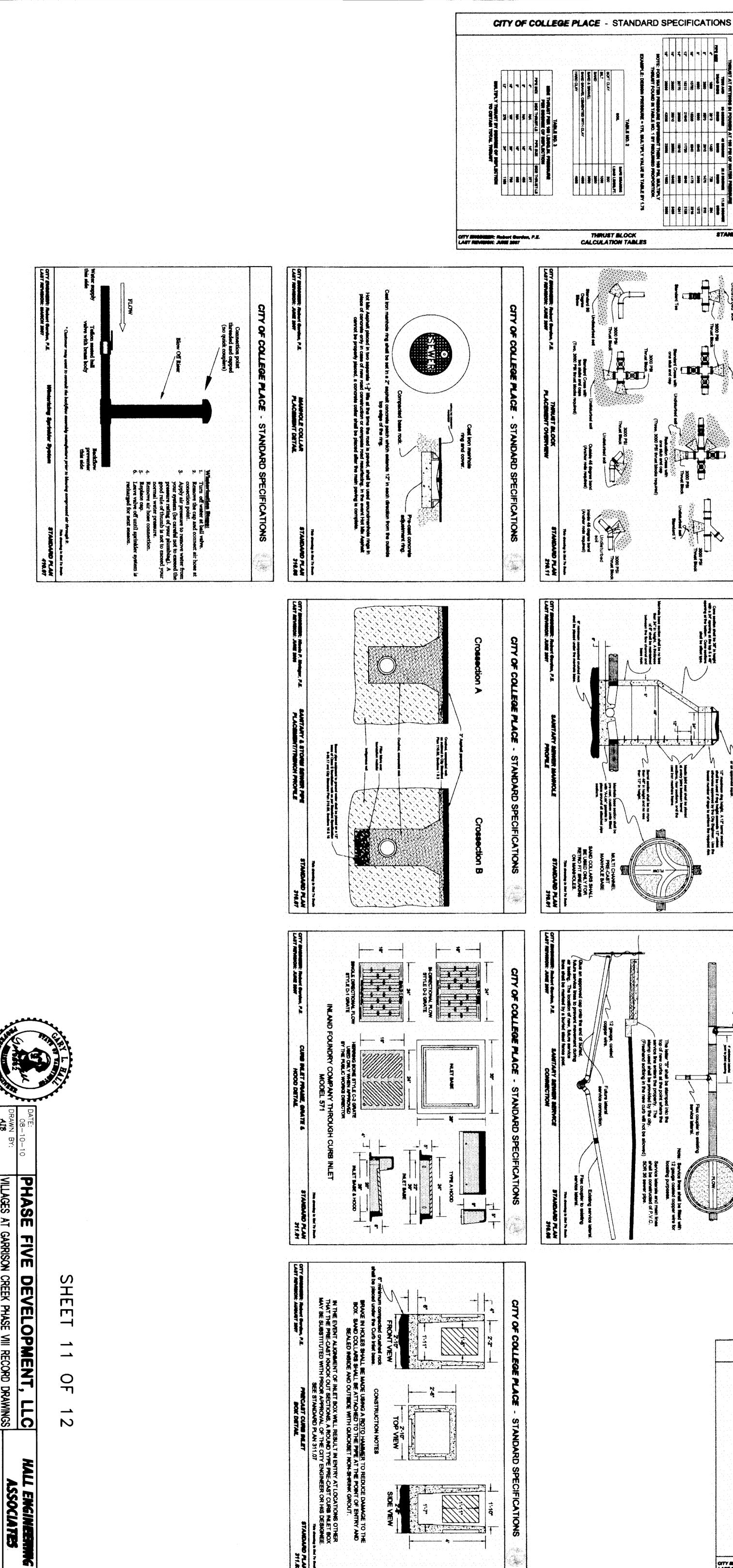
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-10-10 V BY: PHASE FIVE DEVELOPMENT,

LLC HALL ENGINEERING

10 SOUTH AMBURN - KENNEWICK, WA 98336 (500) 582-2200 - FAX (500) 586-2887 **ASSOCIATES** 

VILLAGES AT GARRISON CREEK PHASE VIII RECORD DRAWINGS
CITY SPECIFICATIONS

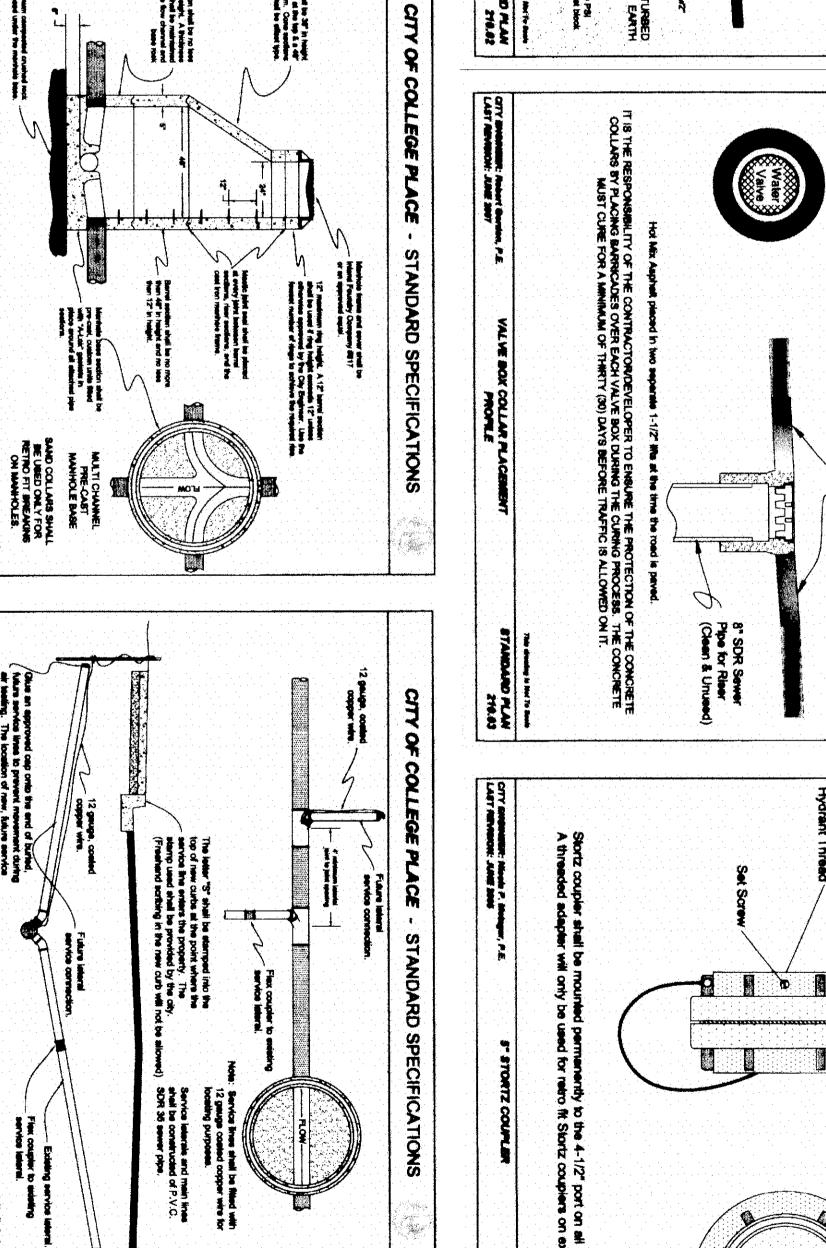


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VILLAGES AT

GARRISON CREEK PHASE VIII RECORD DRAWINGS CITY OF COLLEGE PLACE DETAILS

10 SOUTH AUBURN - KENNEWICK, WA 98336 (508) 582-2200 - FAX (508) 586-2887



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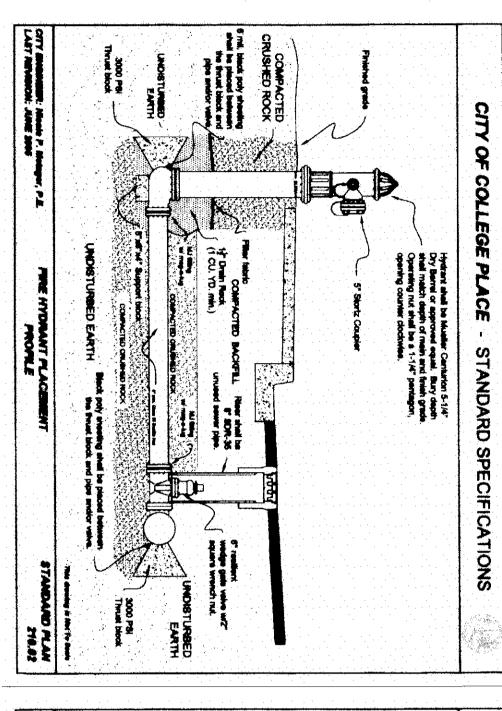
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STANDARD PLAN

CITY OF COLLEGE PLACE

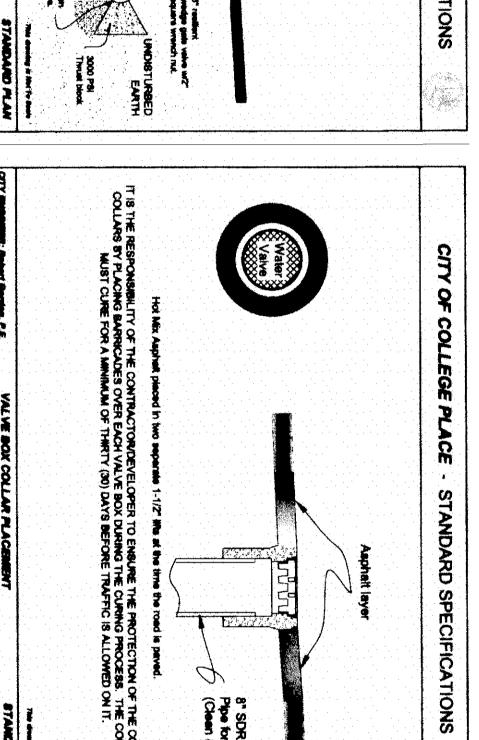
STANDARD SPECIFICATIONS



PLACE

STANDARD

SPECIFICATIONS



CITY OF COLLEGE PLACE

