

FILTER FABRIC FENCE (TYP.)
SEE DETAIL, SHEET C2.31

INLET FILTER PROTECTION (TYP.)
SEE DETAIL, SHEET C2.31

EROSION CONTROL POND
SEE STORM DRAINAGE DETAIL
SHEET C4.31
BERM EL. 326.50
SPILLWAY EL. 325.50
NORMAL W.S. EL. 317.75
TEMP. RISER EL. 324.00
POND BOTTOM EL. 314.75 CELL 1
316.75 CELL 2

ROCK-LINE SWALE
SEE DETAIL, SHEET C2.31

INTERCEPTOR SWALE (TYP.)
SEE DETAIL, SHEET C2.31

CONSTRUCTION ENTRANCE (TYP.)
SEE DETAIL, SHEET C2.31

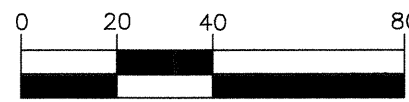
TEMPORARY 30LF 12"
CULVERT AT 1% MIN.
SLOPE

CLEARING LIMITS (TYP.)

STATE HIGHWAY 527 BOTHELL-EVERETT HIGHWAY



SCALE: 1" = 40'



DATUM

NAVD 88

BENCHMARK

SNOHOMISH COUNTY BM #1357
CHISELED SQUARE AT THE SOUTHWEST CORNER
FOUNDATION OF BUILDING NORTH OF OLD LARRY'S
SMOKEHOUSE ON EAST SIDE SR 527.
ELEV. = 361.06

BASIS OF BEARINGS

N73°59'06"E BETWEEN THE MONUMENTS FOUND AT THE
51/4 CORNER SEC. 31-28-5 (SNO. CO. SURVEY
CONTROL PT. 92) AND SNOHOMISH COUNTY SURVEY
CONTROL PT. 550 PER SNOHOMISH COUNTY
DEPARTMENT OF PUBLIC WORKS HORIZONTAL CONTROL
NETWORK.

LEGEND

- SEDIMENTATION POND
- FILTER FABRIC FENCE
- INTERCEPTOR SWALE
- ROCK-LINED SWALE
- CONSTRUCTION ACCESS
- CLEAR PLASTIC COVER
- LIMITS OF CLEARING
- CONSTRUCTION SEQUENCE
- ROCK CHECK DAM
- INLET FILTER
- ORANGE CLEARING LIMIT FENCING

ACCEPTED FOR CONSTRUCTION
CITY OF MILL CREEK
Angela Stevenson 7/14/2004
DIRECTOR OF PUBLIC WORKS DATE

ACCEPTED AS IN COMPLIANCE
WITH CONDITIONS OF APPROVAL
FOR PP 03-60
W. Steven Stevens 7-15-04
DIRECTOR OF COMMUNITY DEVELOPMENT DATE

NO.	REVISIONS	DATE
1	PER CITY COMMENTS	07/01/04

14711 NE 29th Place, #101
Bellevue, Washington 98007
425.885.7877 Fax 425.885.7963

CORE DESIGN
ENGINEERING · PLANNING · SURVEYING

EROSION CONTROL PLAN
COTTAGES AT MILL CREEK
WEDGEWOOD AT MILL CREEK, L.L.C.
1203 114th AVENUE S.E.
BELLEVUE, WASHINGTON 98004

DATE: MAY, 2004	DESIGNED: R.H. STEVENS	OF
	DRAWN: M. J. STEWART	
	APPROVED:	
	ROBERT H. STEVENS	
	PROJECT MANAGER	
SHEET: C2.01	14	
PROJECT NUMBER: 03037		

CONSTRUCTION SEQUENCE

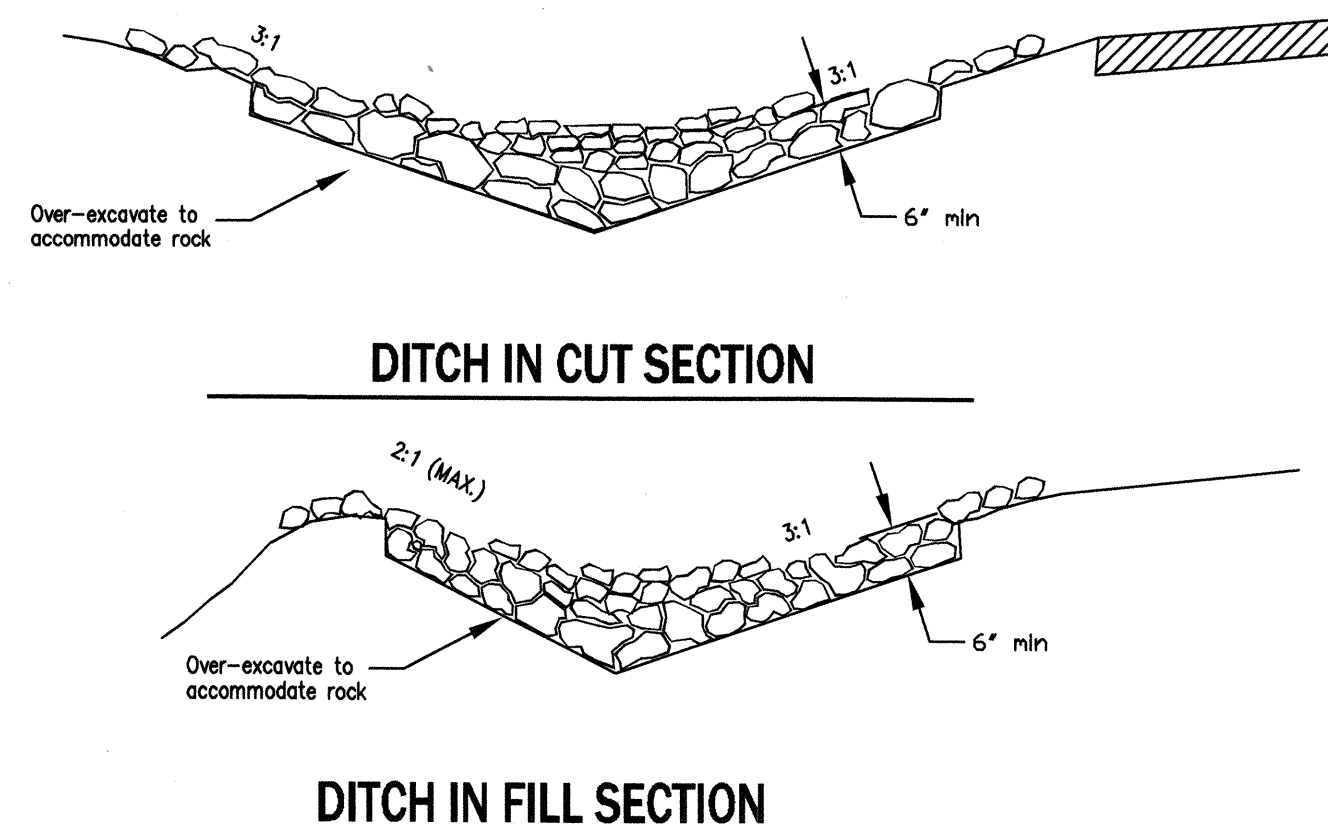
1. PRIOR TO ANY CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL SCHEDULE AND ATTEND A PRE-CONSTRUCTION CONFERENCE WITH THE CITY OF MILL CREEK INSPECTOR BY PHONING 425-745-1891.
2. FLAG LIMITS OF CLEARING IN FIELD AS INDICATED ON EROSION CONTROL PLANS. CALL FOR CITY INSPECTION.
3. INSTALL ALL FILTER FABRIC FENCES. CALL FOR CITY INSPECTION.
4. CLEAR FOR AND CONSTRUCT THE ROCKED CONSTRUCTION ACCESS TO GRADE.
5. CONSTRUCT SEDIMENT POND AND DOWNSTREAM DRAINAGE SYSTEM (CB1-CB2), ALONG WITH TEMP. STANDPIPES, INTERCEPTOR SWALES, AND ROCK CHECK DAMS AS INDICATED ON THIS PLAN.
6. CLEAR, GRUB, AND GRADE SITE PER GRADING PLAN.
7. CONSTRUCT UTILITIES, PAVING, AND CURBING PER APPROVED DESIGN PLANS. DIRECT STORMWATER RUNOFF TO POND AS SOON AS POSSIBLE.
8. GRASS SEED/HYDROSEED DISTURBED AREAS AS SOON AS POSSIBLE. PROVIDE OTHER TEMPORARY COVER MEASURES AS REQUIRED TO THE SATISFACTION OF THE CITY INSPECTOR.
9. REMOVE TEMPORARY SEDIMENTATION/EROSION CONTROL MEASURES ONLY AFTER ALL DANGER OF EROSION AND SILTATION HAS PASSED TO THE SATISFACTION OF THE CITY INSPECTOR. CLEAN OUT ALL PERMANENT DETENTION FACILITIES USED FOR SEDIMENTATION CONTROL AS NECESSARY.

EROSION CONTROL BMP's

- Interceptor Swales
- Slope Drains
- Construction Entrances
- Rip-Rap
- Temporary or Permanent Seeding
- Mulching and/or Matting
- Plastic Covering
- Sodding
- Inlet Protection
- Check Dams
- Surface Roughening
- Filter Fences
- Straw Bale Barriers
- Gravel Filter Berms
- Sediment Traps
- Stabilized Construction Roads
- Level Spreaders

EROSION CONTROL NOTES

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CITY OF MILL CREEK STANDARDS AND SPECIFICATIONS AND APWA/WSDOT 2004 STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION.
2. PRIOR TO ANY CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL SCHEDULE AND ATTEND A PRE-CONSTRUCTION CONFERENCE WITH THE CITY OF MILL CREEK CONSTRUCTION INSPECTION PERSONNEL BY PHONING (425)745-1891.
3. ALL LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD THEREFORE BE CONSIDERED APPROXIMATE AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS SHOWN AND TO FURTHER DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN HEREON WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN. THE CONTRACTOR SHALL CONTACT THE UNDERGROUND UTILITIES LOCATION SERVICE (1-800-424-5555) AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. THE OWNER OR HIS REPRESENTATIVE AND THE ENGINEER SHALL BE CONTACTED IMMEDIATELY IF A CONFLICT EXISTS.
4. A RIGHT OF WAY USE PERMIT IS REQUIRED FROM THE CITY OF MILL CREEK FOR THIS PROJECT. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN STREET USE AND ANY OTHER RELATED PERMITS PRIOR TO ANY CONSTRUCTION.
5. THE CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE UTILITY COMPANIES FOR CAPPING, ABANDONING, AND/OR RELOCATING AFFECTED WATER, SANITARY SEWER, GAS, POWER, TELEPHONE, AND CABLE T.V. PRIOR TO GRADING ACTIVITIES.
6. A COPY OF THESE APPROVED PLANS AND CITY OF MILL CREEK STANDARD SPECIFICATIONS AND DETAILS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
7. APPROVAL OF THIS PLAN IS FOR THE EROSION/SEDIMENTATION CONTROL FACILITIES ONLY. IT DOES NOT CONSTITUTE AN APPROVAL OF THE STORM DRAINAGE DESIGN, NOR SIZE OR LOCATION OF PIPES, RESTRICTORS, CHANNELS OR DETENTION FACILITIES.
8. ALL LIMITS OF CLEARING AND AREAS OF VEGETATION PRESERVATION, AS PRESCRIBED ON THESE PLANS, SHALL BE CLEARLY FLAGGED IN THE FIELD BY A LICENSED LAND SURVEYOR AND OBSERVED DURING CONSTRUCTION. ALL GROUND COVER OUTSIDE CLEARING LIMITS SHALL REMAIN UNDISTURBED. SPECIAL PROTECTIVE FENCING MAY BE REQUIRED IN CERTAIN AREAS. PRIOR TO MASS CLEARING OF THE SITE, CLEARING LIMITS AND INITIAL EROSION CONTROL MEASURES SHALL BE INSPECTED BY THE CITY.
9. ALL REQUIRED EROSION/SEDIMENTATION CONTROL FACILITIES MUST BE CONSTRUCTED AND IN OPERATION PRIOR TO ANY LAND CLEARING AND/OR OTHER CONSTRUCTION TO INSURE THAT SEDIMENT-LADEN WATER DOES NOT ENTER THE NATURAL DRAINAGE SYSTEM OR DAMAGE DOWNSTREAM PROPERTIES. ALL EROSION/SEDIMENTATION CONTROL FACILITIES SHALL BE MAINTAINED IN A SATISFACTORY CONDITION UNTIL SUCH TIME THAT CLEARING AND/OR CONSTRUCTION IS COMPLETED AND THE POTENTIAL FOR ON-SITE EROSION HAS PASSED. IMPLEMENTATION, MAINTENANCE, REPLACEMENT AND ADDITIONS TO THE EROSION/SEDIMENTATION CONTROL FACILITIES SHALL BE THE RESPONSIBILITY OF THE PERMITTEE. REFER TO THE CONSTRUCTION SEQUENCE, FOR ADDITIONAL DETAILS.
10. THE EROSION/SEDIMENTATION CONTROL FACILITIES DEPICTED ON THIS DRAWING ARE INTENDED TO BE MINIMUM REQUIREMENTS TO MEET ANTICIPATED SITE CONDITIONS. AS CONSTRUCTION PROGRESSES AND UNEXPECTED OR SEASONAL CONDITIONS DICTATE, THE PERMITTEE SHOULD ANTICIPATE THAT MORE EROSION/SEDIMENTATION CONTROL FACILITIES MAY BE NECESSARY TO INSURE COMPLETE SILTATION CONTROL ON THE SITE. DURING THE COURSE OF CONSTRUCTION, IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE PERMITTEE TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY HIS ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES OVER AND ABOVE MINIMUM REQUIREMENTS SHOWN, AS MAY BE NEEDED TO PROTECT ADJACENT PROPERTIES AND THE WATER QUALITY OF THE RECEIVING DRAINAGE SYSTEM. THE CITY OF MILL CREEK INSPECTOR MAY DETERMINE THE NEED FOR AND EXTENT OF ANY ADDITIONAL FACILITIES.
11. WHERE POSSIBLE, NATURAL VEGETATION SHALL BE MAINTAINED FOR SILT CONTROL AND TO MINIMIZE EROSION.
12. ALL EXPOSED SOIL SHALL BE STABILIZED BY SUITABLE APPLICATION OF BEST MANAGEMENT PRACTICES (BMPs), INCLUDING BUT NOT LIMITED TO SOO OR OTHER VEGETATION, PLASTIC COVERING, MULCHING, OR APPLICATION OF GRAVEL BASE ON AREAS TO BE PAVED. ALL BMPs SHALL BE SELECTED, DESIGNED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED MANUAL. FROM OCTOBER 1 THROUGH APRIL 30, NO UNWORKED SOIL SHALL REMAIN EXPOSED FOR MORE THAN 48 HOURS (INCLUDING ALL CALENDAR DAYS, HOLIDAYS, SUNDAYS, ECT.). FROM MAY 1 THROUGH SEPTEMBER 30, NO UNWORKED SOIL SHALL REMAIN EXPOSED FOR MORE THAN 7 DAYS. RAINY SEASON WORK GUIDELINES MAY ALSO APPLY.
13. ALL AREAS TO BE SEEDDED SHALL BE CULTIVATED TO THE SATISFACTION OF THE ENGINEER. THIS MAY BE ACCOMPLISHED BY DISCING, RAKING, HARROWING OR OTHER ACCEPTABLE MEANS. IMMEDIATELY FOLLOWING FINISH GRADING, PERMANENT VEGETATION (CONSISTING OF RAPID, PERSISTENT AND LEGUME) SHALL BE APPLIED AT A MINIMUM RATE OF 120 POUNDS PER ACRE. THE SEED SHALL CONFORM TO THE STANDARDS FOR "CERTIFIED" GRADE SEED OR BETTER, AS OUTLINED BY THE STATE OF WASHINGTON DEPARTMENT OF AGRICULTURE "RULES FOR SEED CERTIFICATION", LATEST EDITION. THE MIX SHALL CONFORM WITH CITY OF MILL CREEK STANDARDS AND SPECIFICATIONS.
14. A MINIMUM 3 FOOT HIGH TEMPORARY FENCE SHALL BE CONSTRUCTED AROUND ANY POND USED FOR EROSION/SEDIMENTATION CONTROL WHERE IT CAN BE EXPECTED THAT THE WATER DEPTH WILL EXCEED ONE FOOT.
15. THE CONTRACTOR SHALL ASSURE THAT NO CONCRETE OR CONCRETE BY-PRODUCTS ENTER THE STORM DRAINAGE SYSTEM OR NATURAL STREAM COURSES. A MINIMUM 200 CU. FT. SUMP SHALL BE PROVIDED FOR WASHING OUT CONCRETE TRUCKS. (SEE PLANS FOR SUMP LOCATION.)
16. IMPERVIOUS SURFACES (ROOFS, STREETS, DRIVEWAYS, ETC.) SHALL BE DIRECTED INTO THE COMPLETED STORM DRAINAGE SYSTEM AS SOON AS POSSIBLE.
17. SILTATION CONTROL AREAS SHALL BE RETURNED TO ORIGINAL GROUND CONDITIONS OR BROUGHT TO FINISH GRADE AT THE PROJECT'S COMPLETION. ANY PERMANENT STORM DRAINAGE FACILITIES USED FOR EROSION/SEDIMENTATION CONTROL SHALL BE FLUSHED AND CLEANED PRIOR TO PROJECT ACCEPTANCE.
18. THE CONTRACTOR SHALL KEEP OFF-SITE STREETS CLEAN AT ALL TIMES BY SWEEPING. FLUSHING OF THESE STREETS WILL NOT BE ALLOWED.
19. 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 CONTRACT. 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. ALL SECTIONS OF THE WSDOT STANDARD SPECIFICATIONS 1-07.23 TRAFFIC CONTROL SHALL APPLY.
20. ISSUANCE OF THIS BUILDING PERMIT BY THE CITY OF MILL CREEK DOES NOT RELIEVE THE OWNER OF HIS CONTINUING LEGAL OBLIGATION AND/OR LIABILITY CONNECTED WITH STORM AND SURFACE WATER DISPOSITION AND FURTHER, THE CITY OF MILL CREEK DOES NOT ACCEPT ANY OBLIGATION FOR THE PROPER FUNCTIONING AND MAINTENANCE OF THE SYSTEM PROVIDED.
21. ALL DETENTION AND OUTFALL WORK WILL BE COMPLETED AND FUNCTIONAL BEFORE ANY PAVING.



NOTES:

1. Rock material shall be 8" X 4" quarry spalls meeting WSDOT 9-13.6. Check dams may also be constructed of pea-gravel filled bags or other manufactured products available for this purpose or as approved by the City Engineer.

2. Depth of rock shall be a maximum of 2 feet at the center. The center of the check dam shall be at least twelve inches lower than the outer edges at natural ground elevation.

3. The maximum spacing between the dams shall be such that the toe of the upstream dam is at the same elevation as the top of the downstream dam.

4. Check dams shall be constructed per the Washington State DOE manual for Western Washington.

5. Check dams shall be monitored for performance and sediment accumulation during and after each runoff producing rainfall. Sediment shall be removed when it reaches one half the sump depth.

6. Key the stone into the ditch banks and extend it beyond the abutments a minimum of 18 inches to avoid washouts from overflow around the dam.



STANDARD PLANS

STM 011

CHECK DAMS

APPROVED: *David J. Stevens*
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER

REVISION: JAN 2003 NOT TO SCALE BY: L.C.

FINAL_STM_011.DWG

DETAIL NOTES:

1. 4" TO 8" QUARRY SPALLS AS SPECIFIED IN SECTION 9-13.6 OF THE WSDOT STANDARD SPECIFICATIONS.

2. THE MINIMUM LENGTH SHALL BE LENGTHENED AS NECESSARY TO ENSURE MATERIAL IS NOT TRACKED INTO THE PUBLIC RIGHT-OF-WAY. ALTERNATE CONSTRUCTION ENTRANCES MAY BE ALLOWED WITH APPROVAL OF THE CITY ENGINEER ON A CASE BY CASE BASIS, WHERE PHYSICAL SITE CONDITIONS AND SIZE DICTATE.

3. INSTALL ORANGE BARRIER FENCE TO DIRECT TRAFFIC ONTO CONSTRUCTION ENTRANCE.

4. INSTALLATION: THE AREA OF THE ENTRANCE SHOULD BE CLEARED OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL. THE GRAVEL SHALL BE PLACED TO THE SPECIFIED DIMENSIONS. IF WASH RACKS ARE USED, THEY SHOULD BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

GENERAL NOTES:

1. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.

2. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.

3. WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS USED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

4. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.



STANDARD PLANS

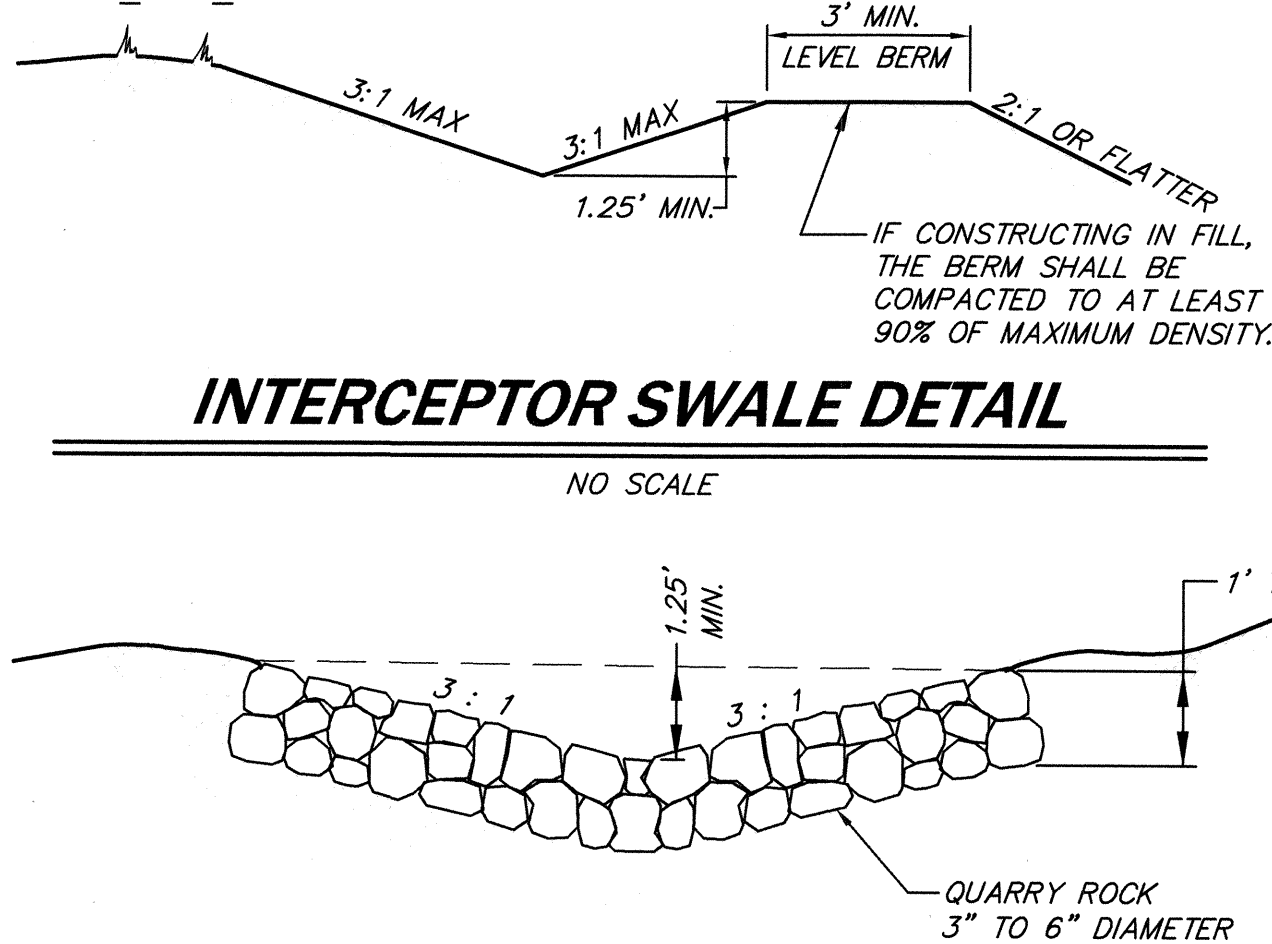
STR 061

GRAVEL CONSTRUCTION ENTRANCE

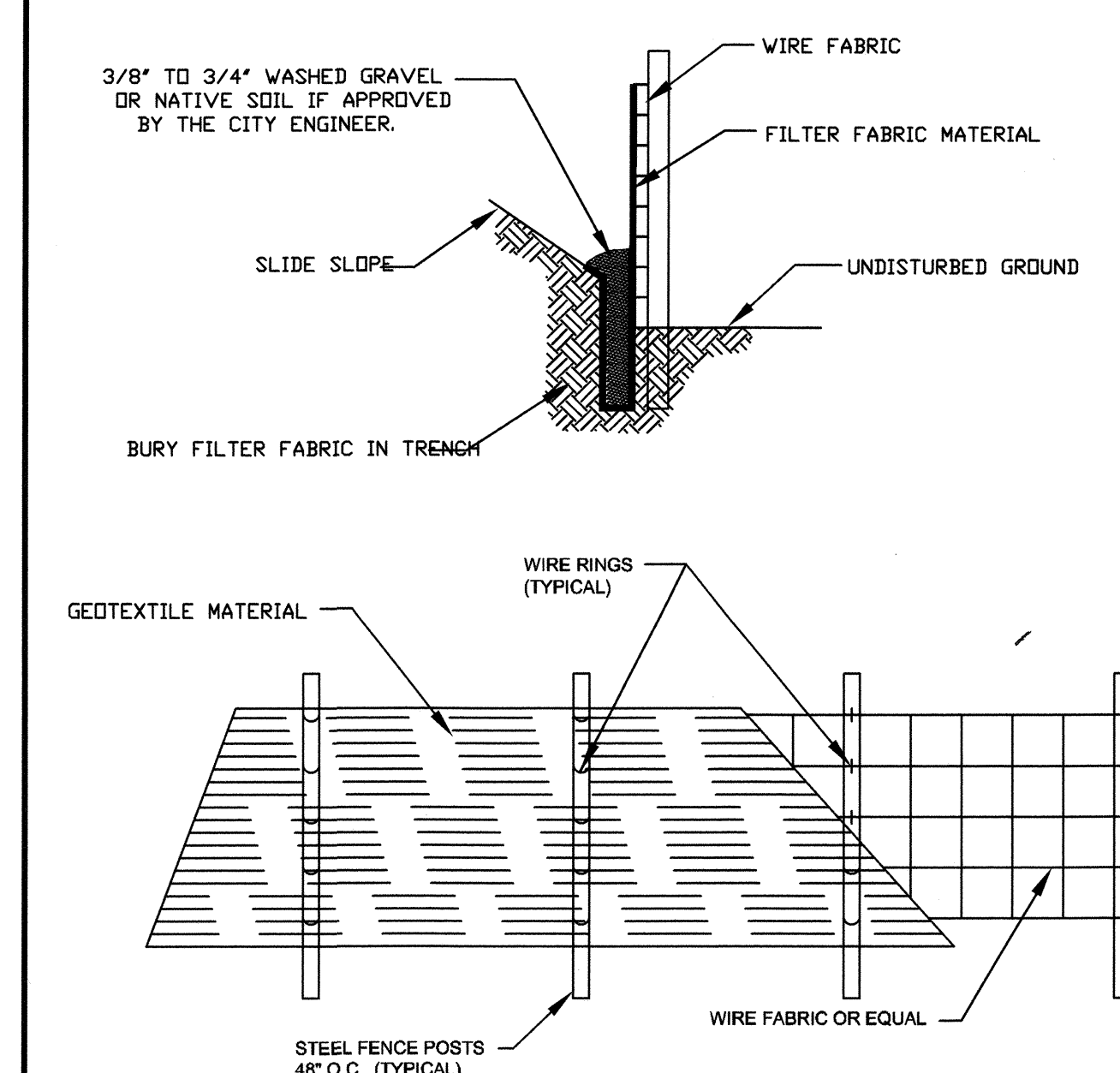
APPROVED: *David J. Stevens*
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER

REVISION: JAN 2003 NOT TO SCALE BY: LC

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**ROCK-LINED SWALE DETAIL**

NO SCALE



STANDARD PLANS

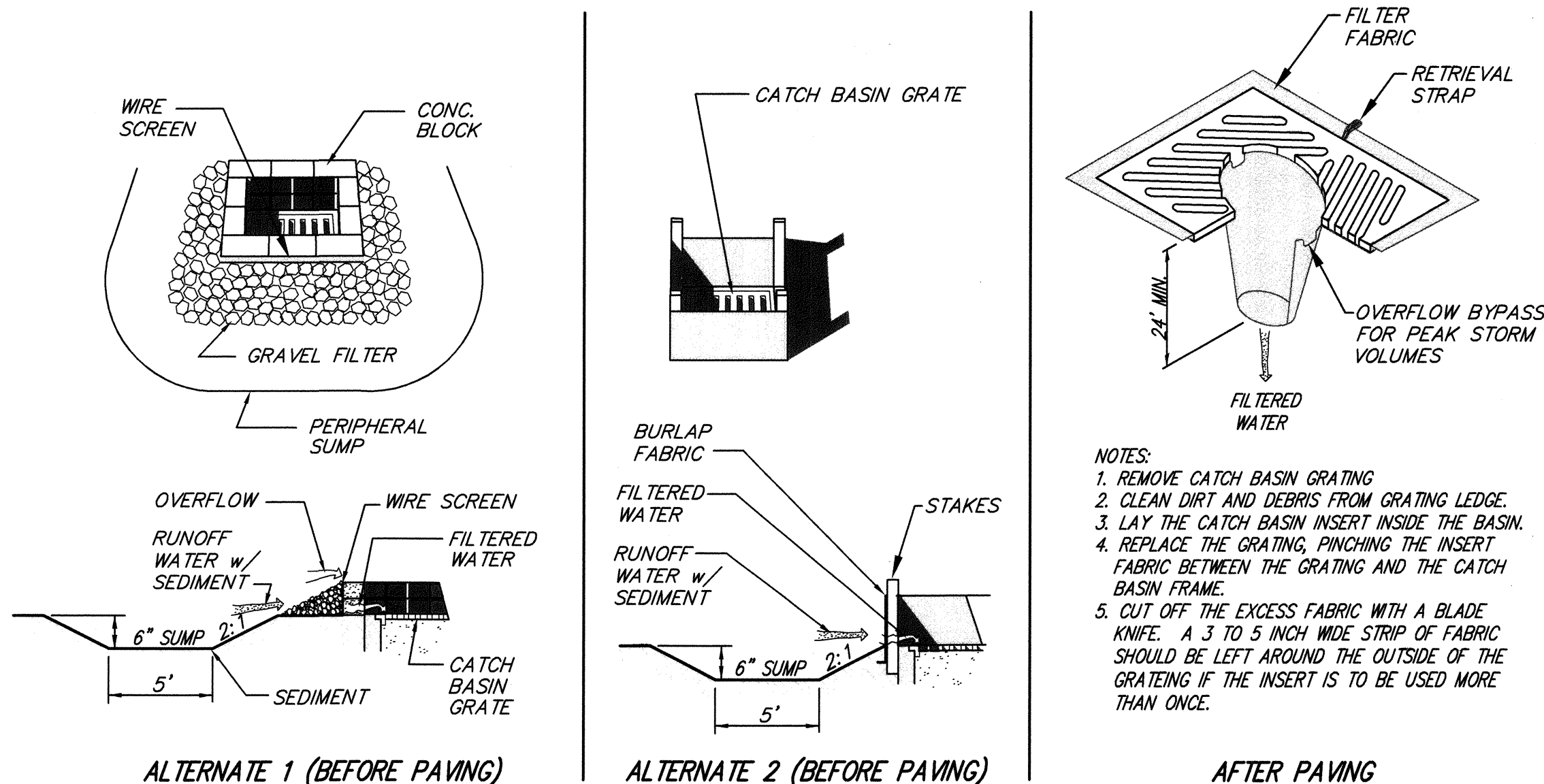
STM 014

TYPICAL SILT FENCE DETAIL

APPROVED: *David J. Stevens*
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER

REVISION: JAN 2003 NOT TO SCALE BY: M.C.

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**CATCH BASIN PROTECTION OPTIONS**

NO SCALE

NOTES:

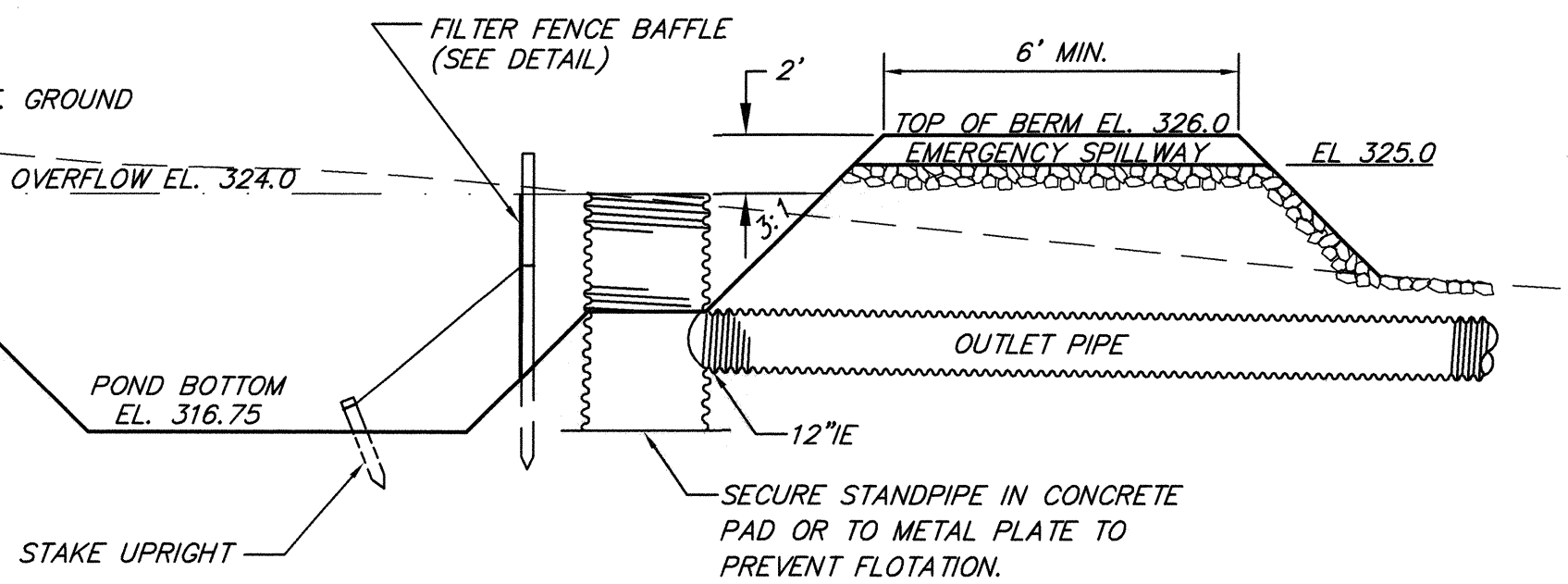
1. REMOVE CATCH BASIN GRATING
2. CLEAN DIRT AND DEBRIS FROM GRATING LEDGE.
3. LAY THE CATCH BASIN INSERT INSIDE THE BASIN.
4. REPLACE THE GRATING, PINCHING THE INSERT FABRIC BETWEEN THE GRATING AND THE CATCH BASIN FRAME.
5. CUT OFF THE EXCESS FABRIC WITH A BLADE KNIFE. A 3 TO 5 INCH WIDE STRIP OF FABRIC SHOULD BE LEFT AROUND THE OUTSIDE OF THE GRATING IF THE INSERT IS TO BE USED MORE THAN ONCE.

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Page 7

SEDIMENTATION BASIN DETAIL

NO SCALE



NOTE: SEE SHEET C4.31 FOR SEDIMENT POND PLAN

ACCEPTED FOR CONSTRUCTION

CITY OF MILL CREEK

David J. Stevens

DIRECTOR OF PUBLIC WORKS

7/14/2004

DATE

ACCEPTED AS IN COMPLIANCE

WITH CONDITIONS OF APPROVAL

FOR PP 03-60

William J. Stevens

DIRECTOR OF COMMUNITY DEVELOPMENT

7.15.09

DATE

DATE	07/01/04
REVISIONS	
NO.	1
PER CITY COMMENTS	
NO.	1
DATE	07-13-04

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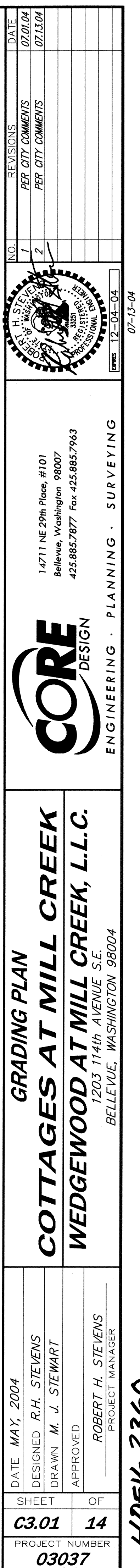
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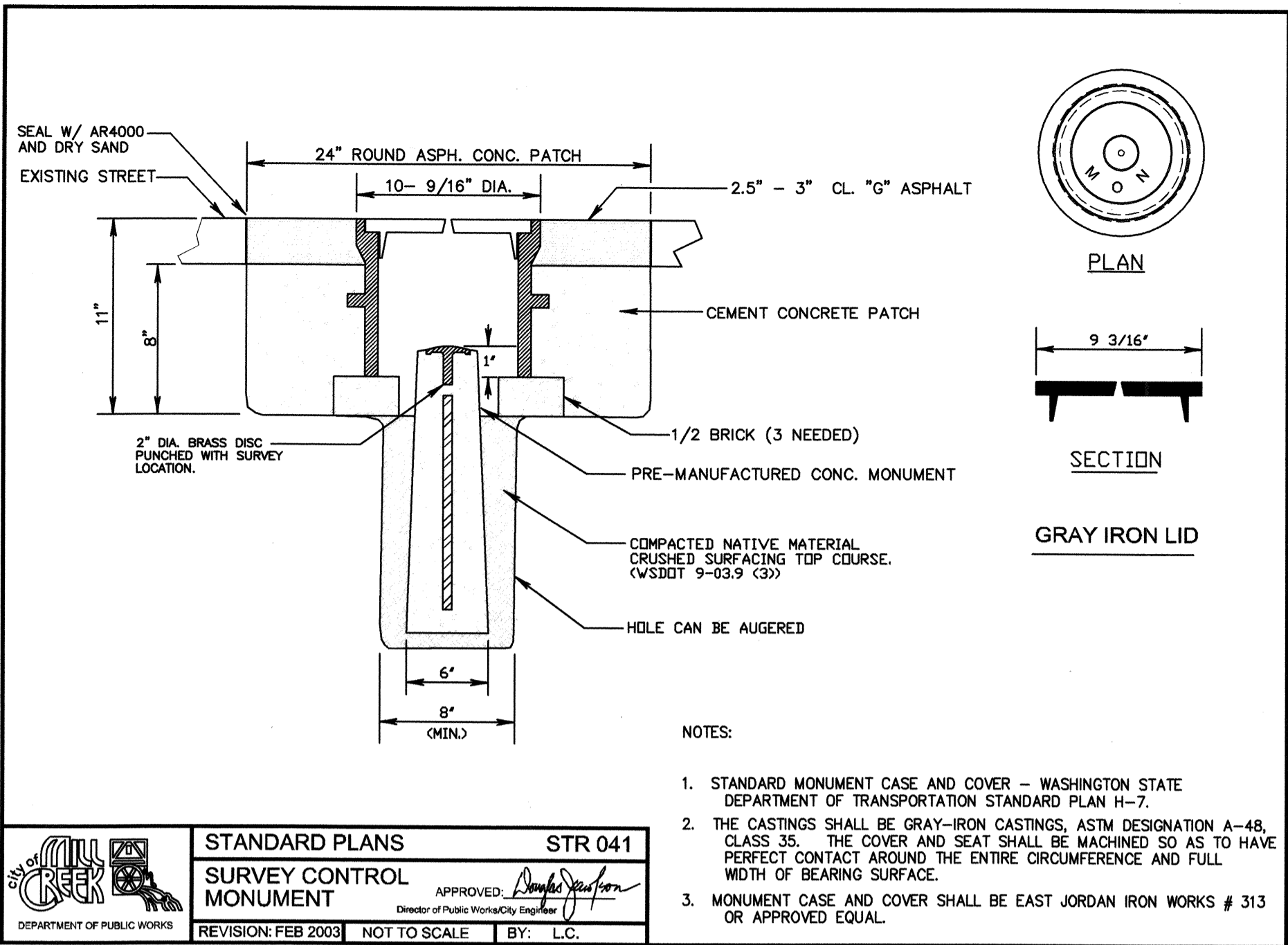
EROSION CONTROL DETAILS
COTTAGES AT MILL CREEK
WEDGEWOOD AT MILL CREEK, L.L.C.
1203 114th AVENUE S.E.
BELLEVUE, WASHINGTON 98004

DATE	MAY, 2004
DESIGNED	R.H. STEVENS
DRAWN	M. J. STEWART
APPROVED	
PROJECT MANAGER	ROBERT H. STEVENS
SHEET	OF
C2.31	14
PROJECT NUMBER	03037

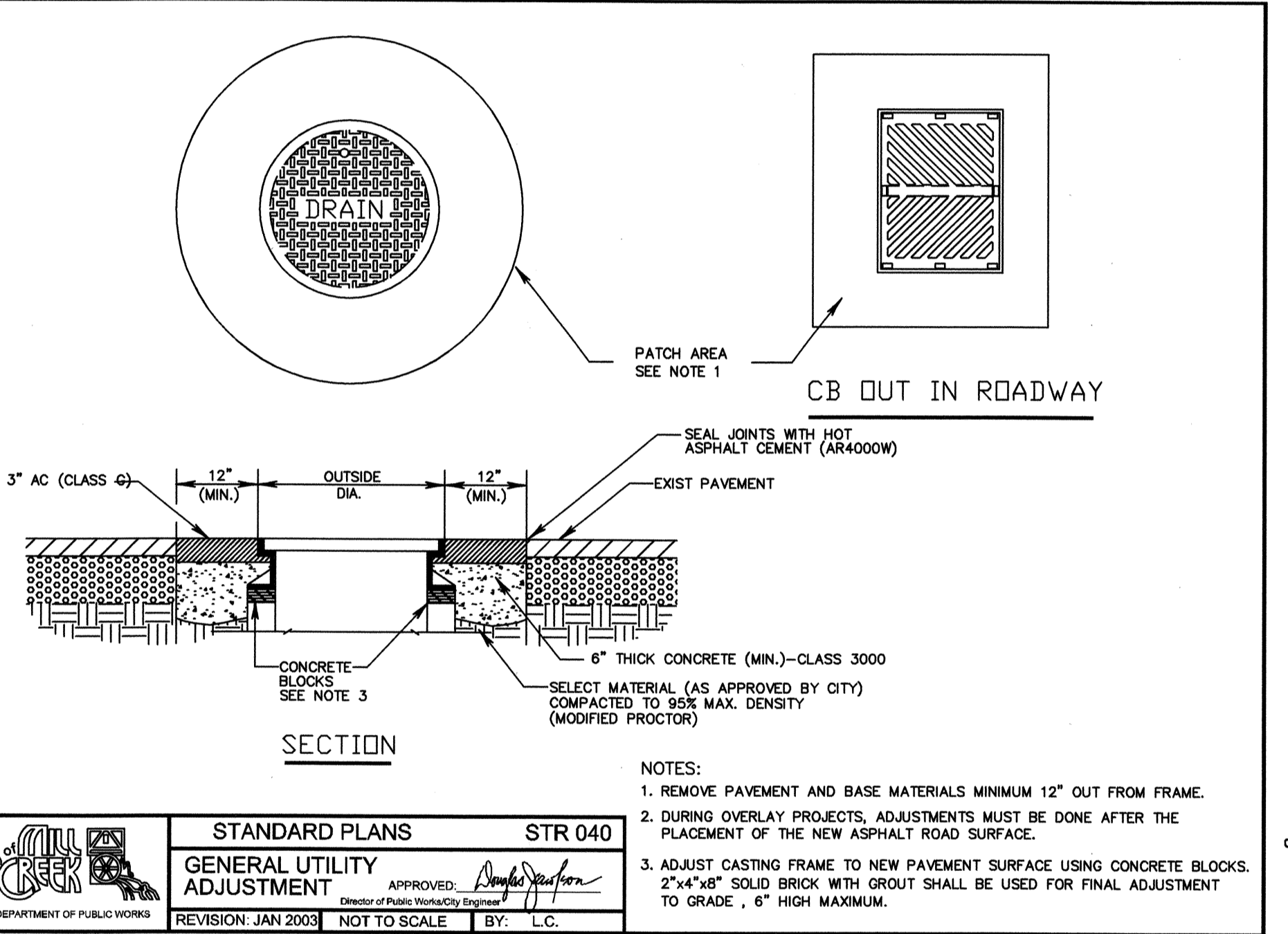
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WOODSIDE WALK

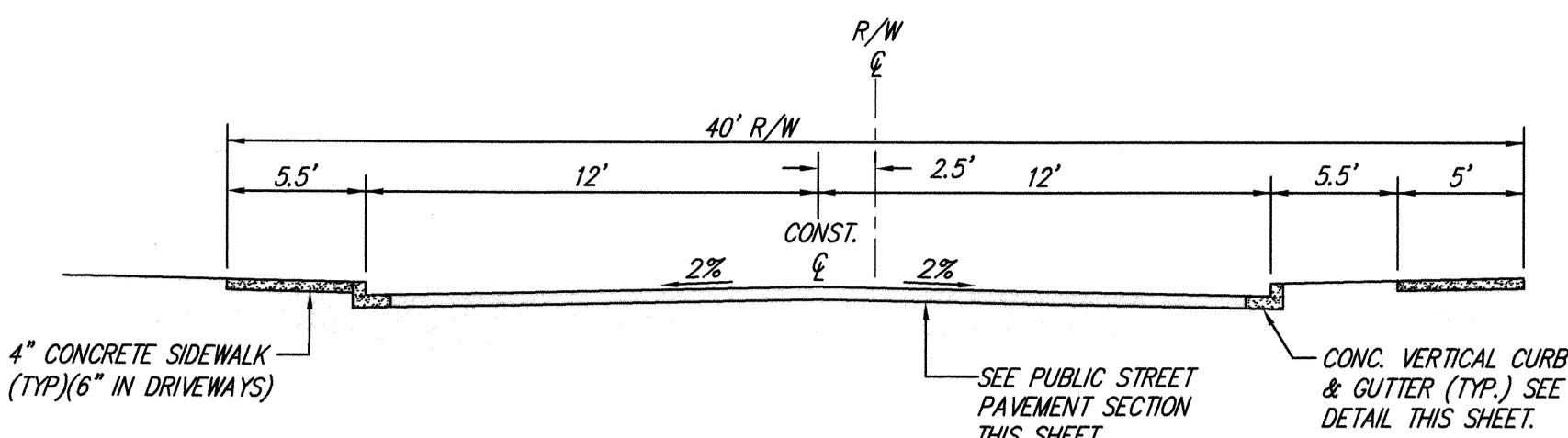




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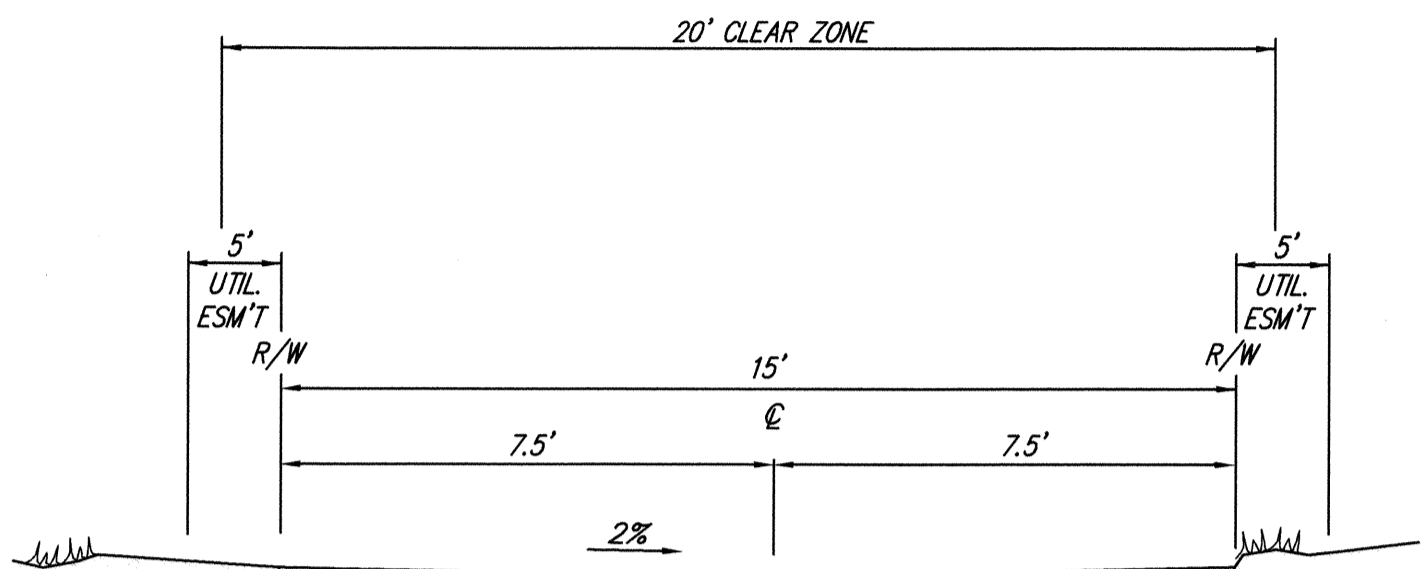


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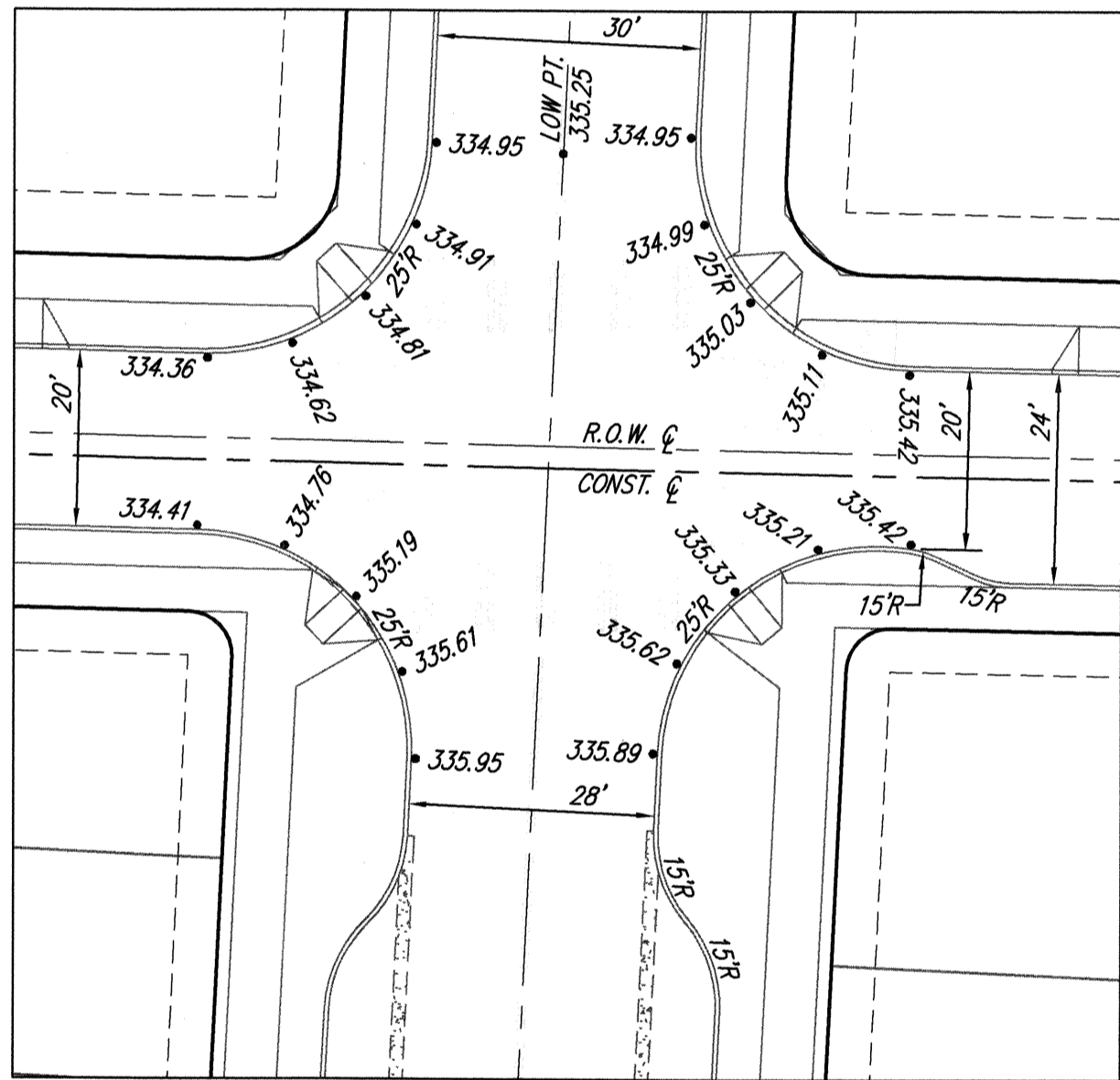
EAST ROAD / WEST ROAD ROADWAY SECTION D-D

NO SCALE



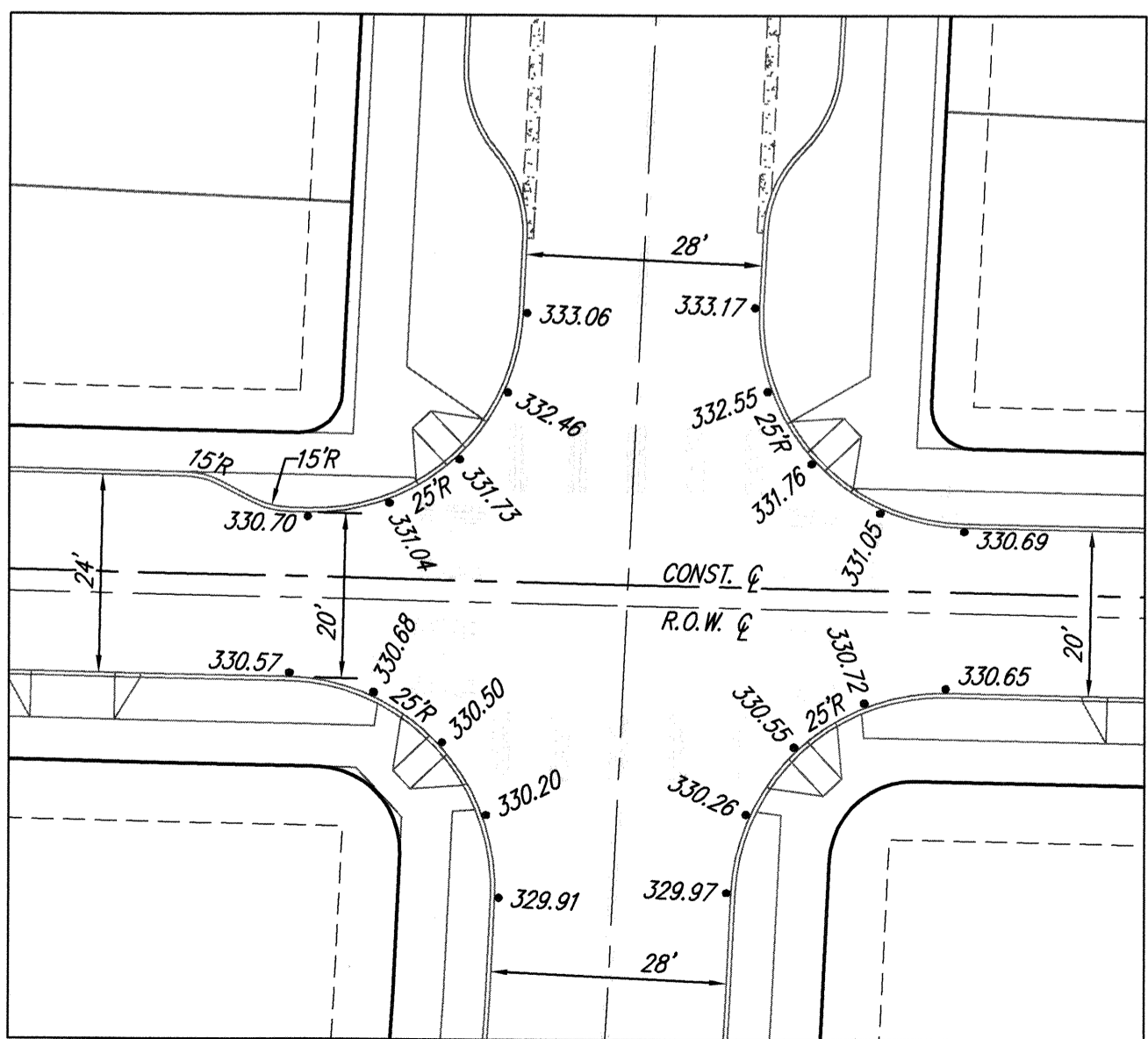
15' ACCESS TRACT / ALLEY SECTION E-E

NO SCALE



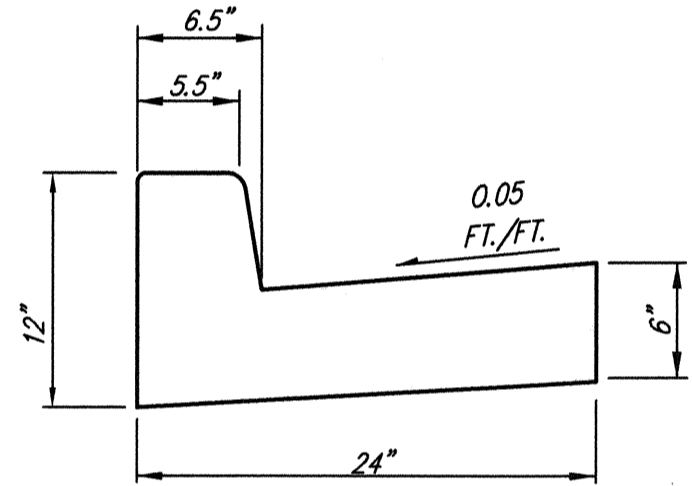
NORTH INT'X. DETAIL

SCALE: 1"=20'



SOUTH INT'X. DETAIL

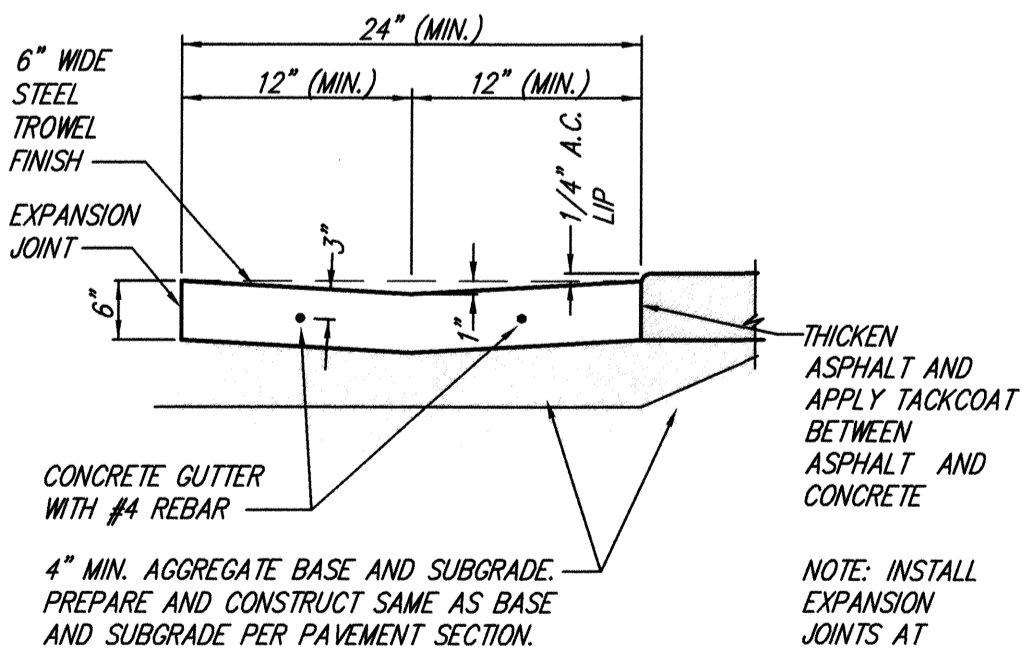
SCALE: 1"=20'



- NOTES:
1. CONCRETE SHALL BE CLASS 3000 AIR ENTRAINED.
 2. IN-SITU NATIVE MATERIAL MAY BE USED FOR A BASE IF APPROVED BY THE CITY ENGINEER. ALTERNATIVE BASE SHALL BE CRUSHED SURFACING TOP COURSE PER W.S.D.O.T. SEC. 9-03.9(3) WITH A MINIMUM DEPTH OF 4 INCH.
 3. STEEL FORMS SHALL BE USED ON ALL STRAIGHT SECTIONS. WOOD BENDER BOARD SHALL BE USED ON RADIUS.
 4. FULL DEPTH EXPANSION JOINTS SHALL BE PLACED AT 10 FEET CENTER TO CENTER, AT THE TOP OF EACH DRIVEWAY, AT TOP OF ACCESS RAMPS, AND ON BOTH SIDES OF A STORM BASIN.
 5. FINISH SHALL BE BROOMED WITH TOOLED EDGES.

VERTICAL CURB & GUTTER DETAIL

NO SCALE



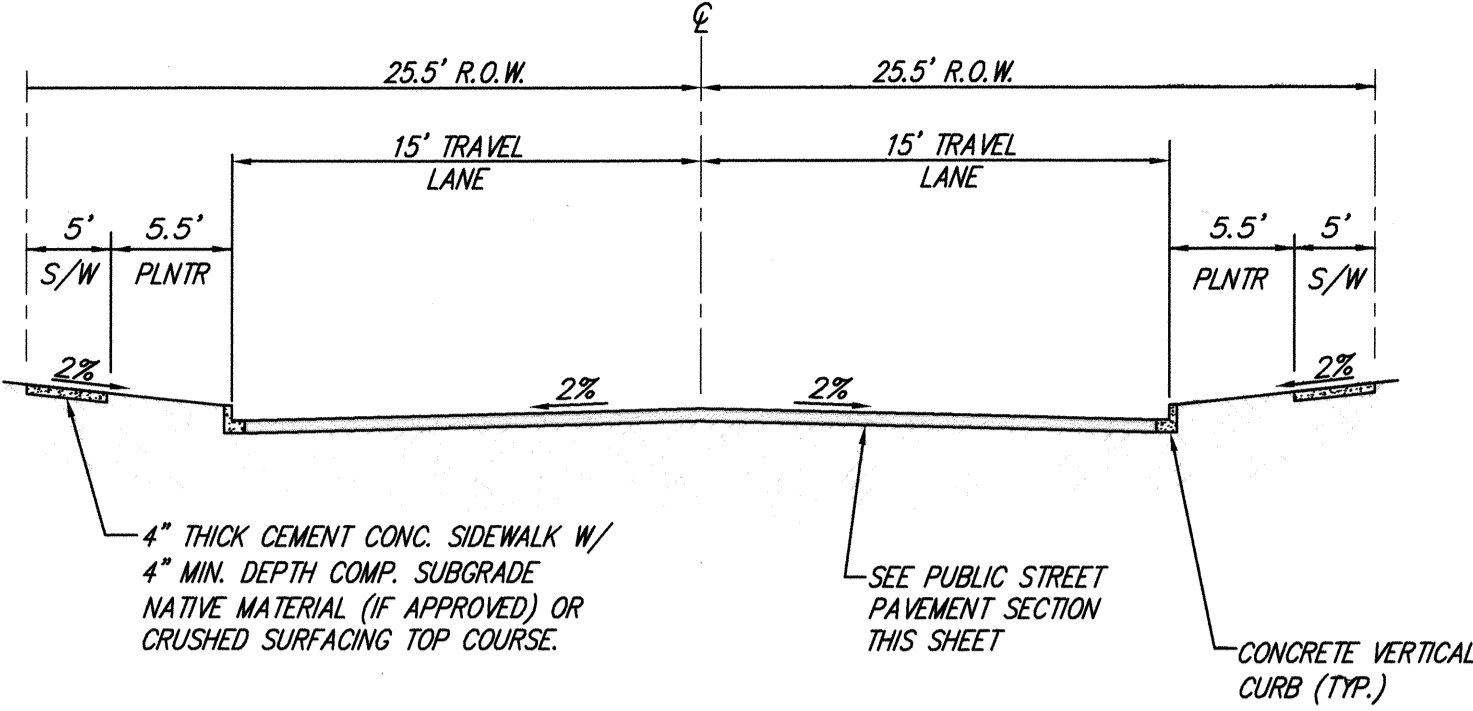
CONCRETE GUTTER DETAIL

NO SCALE

- 2" MIN. ASPHALT CONCRETE, CLASS B
- 3" ASPHALT TREATED BASE (ATB)
- 4" MIN. CRUSHED SURFACING BASE COURSE (WSDOT) 9-03.9(3) MAY BE REQUIRED BY THE CITY ENGINEER COMPACTED TO 95% MAX. DENSITY (MODIFIED PROCTOR).
- NATIVE MATERIAL OR SELECT IMPORT AS APPROVED BY CITY ENGINEER COMPACTED TO 95% MAX. DENSITY (MODIFIED PROCTOR).

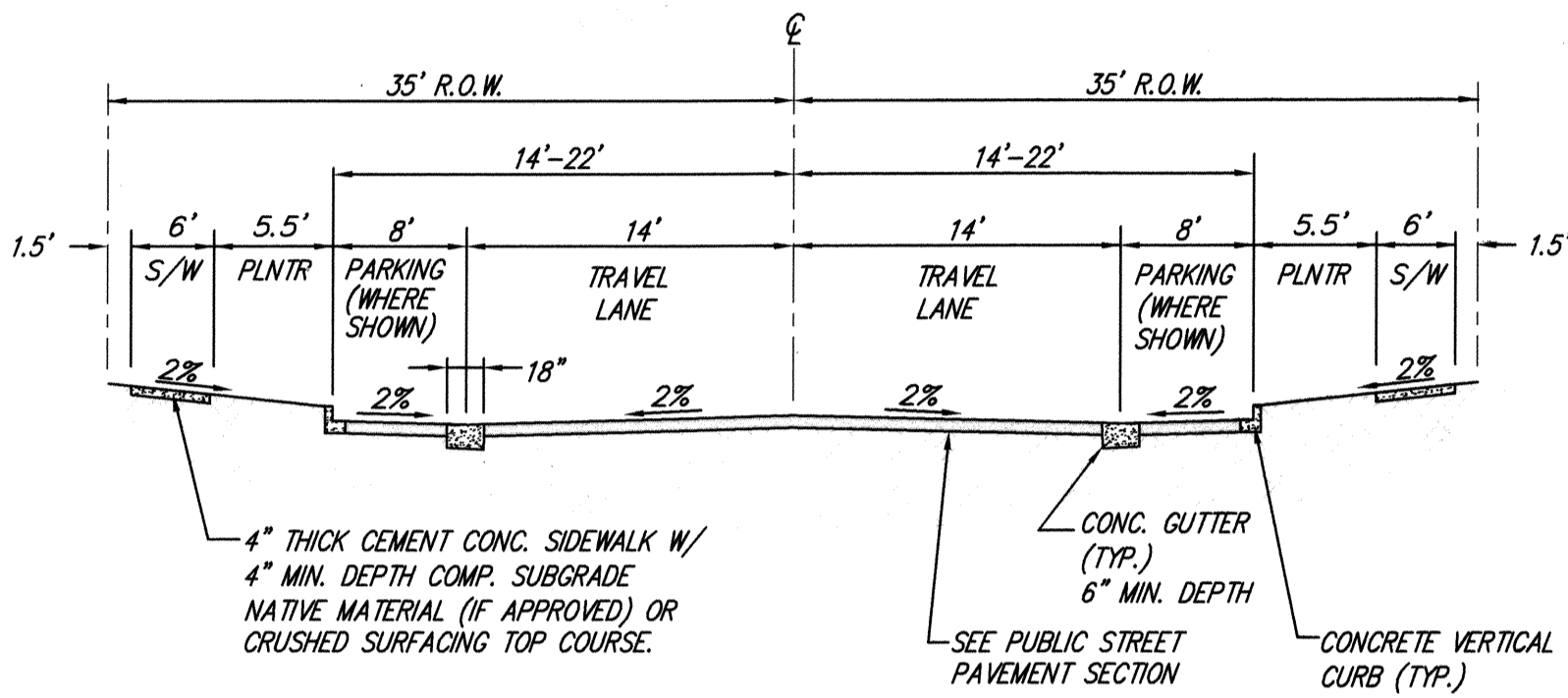
PRIVATE ALLEY PAVEMENT SECTION

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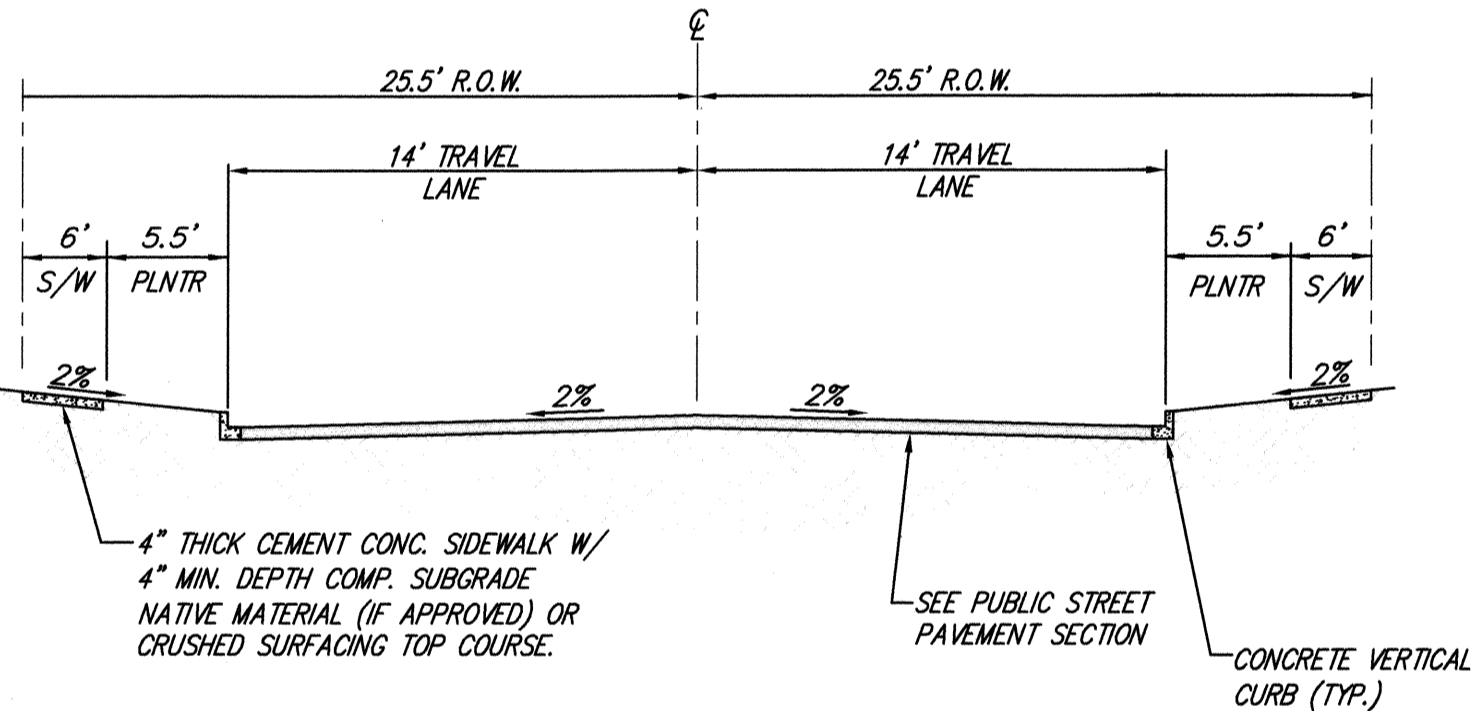
MAIN STREET ROAD SECTION A-A (NORTH OF NORTH INTERSECTION)

NO SCALE



MAIN STREET ROAD SECTION B-B (BETWEEN INTERSECTIONS)

NO SCALE



MAIN STREET ROAD SECTION C-C (SOUTH OF SOUTH INTERSECTION)

NO SCALE

- 2" MIN. ASPHALT CONCRETE, CLASS B
- 4" ASPHALT TREATED BASE (ATB)
- 6" MIN. CRUSHED SURFACING BASE COURSE (WSDOT) 9-03.9(3) MAY BE REQUIRED BY THE CITY ENGINEER COMPACTED TO 95% MAX. DENSITY (MODIFIED PROCTOR).
- NATIVE MATERIAL OR SELECT IMPORT AS APPROVED BY CITY ENGINEER COMPACTED TO 95% MAX. DENSITY (MODIFIED PROCTOR).

PUBLIC STREET PAVEMENT SECTION

NO SCALE

ACCEPTED FOR CONSTRUCTION
CITY OF MILL CREEK
[Signature]
DIRECTOR OF PUBLIC WORKS
7/14/2004
DATE

ACCEPTED AS IN COMPLIANCE
WITH CONDITIONS OF APPROVAL
FOR PP 03-60
[Signature]
DIRECTOR OF COMMUNITY DEVELOPMENT
7-15-04
DATE

REVISIONS		DATE	
NO.	DESCRIPTION <td>DATE<td>BY</td></td>	DATE <td>BY</td>	BY
1	PER CITY COMMENTS	07/01/04	
2	PER CITY COMMENTS	07/13/04	

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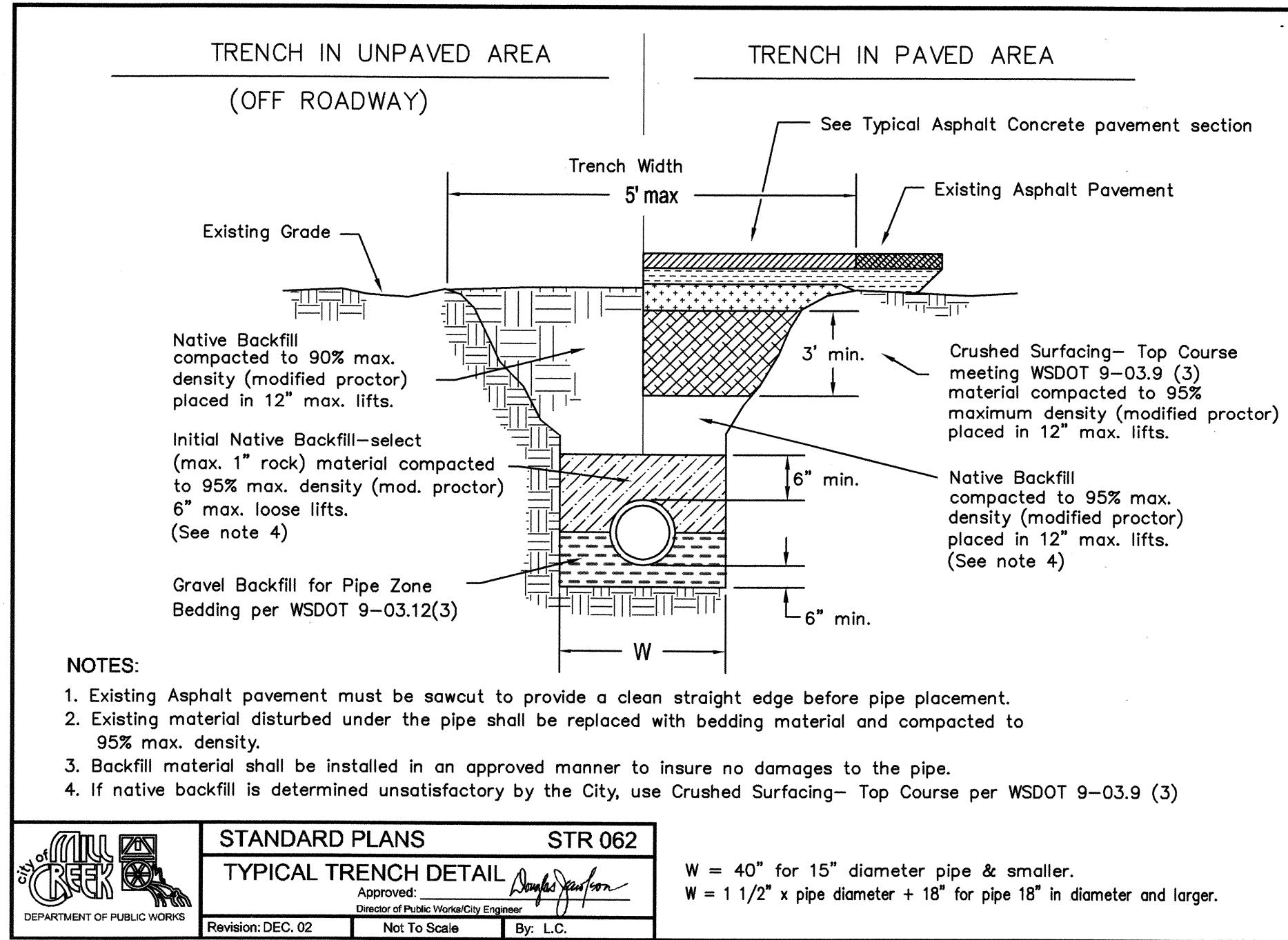
CORE DESIGN
ENGINEERING • PLANNING • SURVEYING

SITE DETAILS
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WEDGEWOOD AT MILL CREEK, L.L.C.
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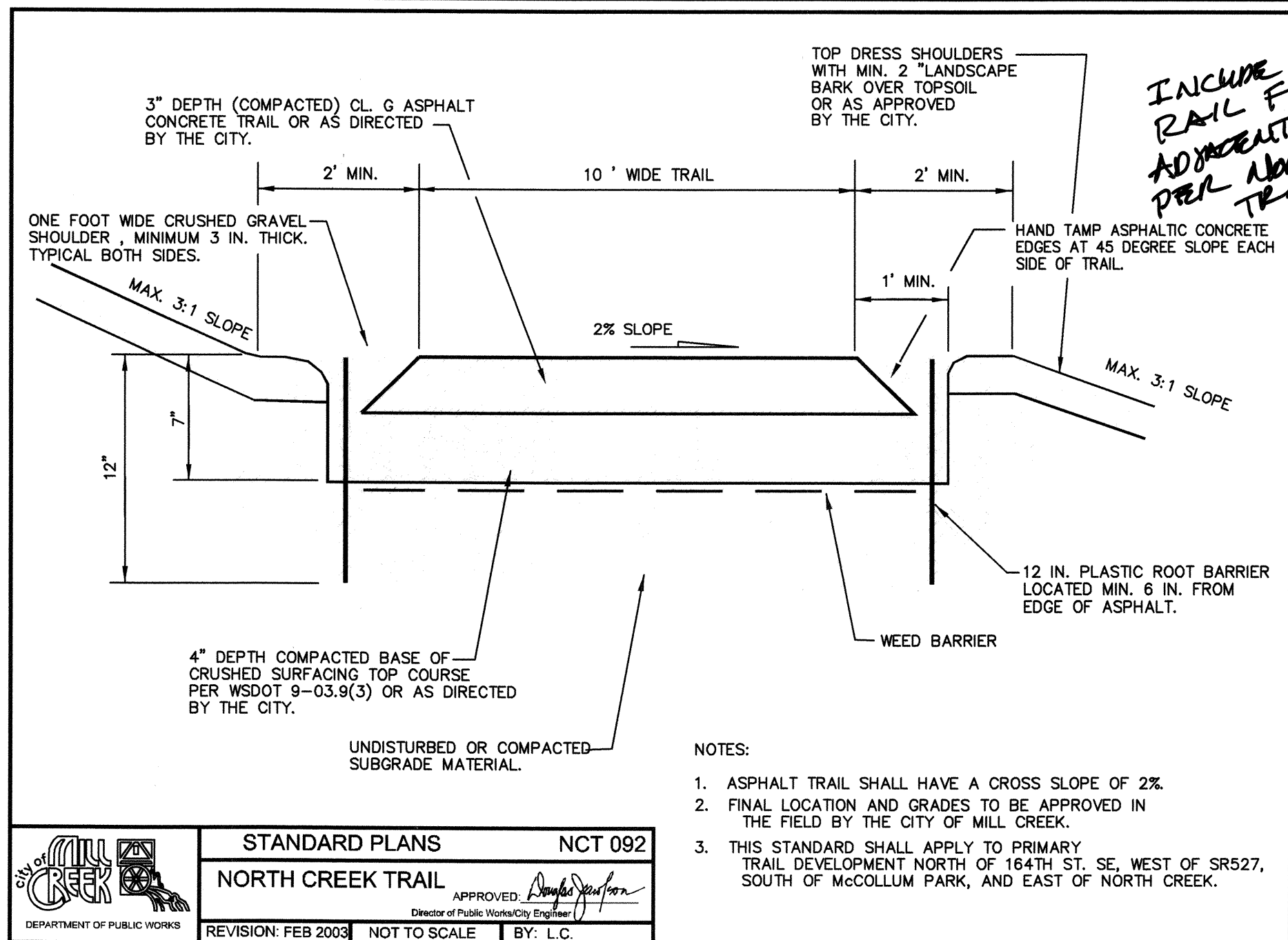
DATE: MAY, 2004
DESIGNED: R.H. STEVENS
DRAWN: M. J. STEWART
APPROVED: [Signature]
PROJECT MANAGER: ROBERT H. STEVENS

SHEET: C3.31 OF 14
PROJECT NUMBER: 03037

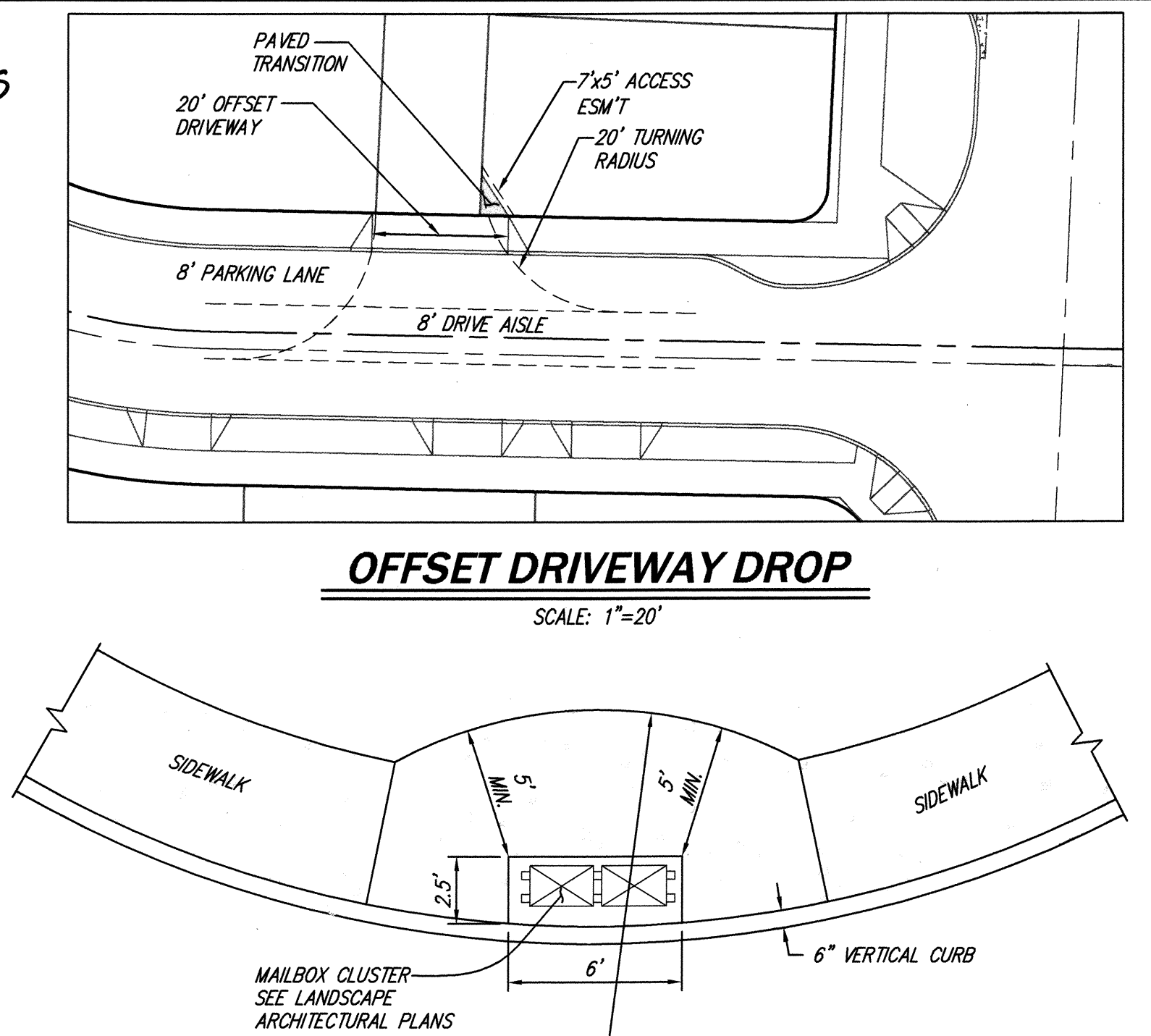
HDEV-2361



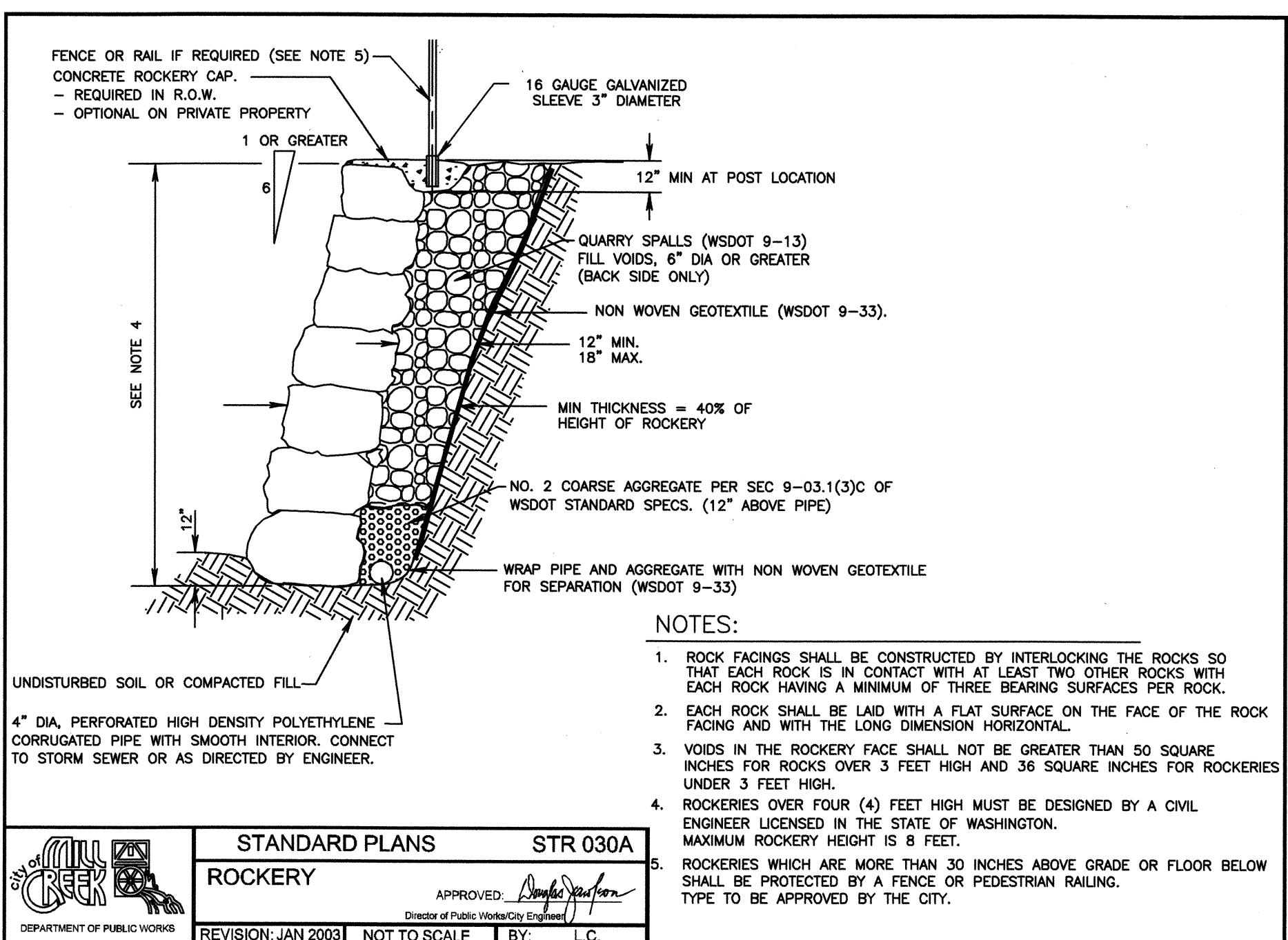
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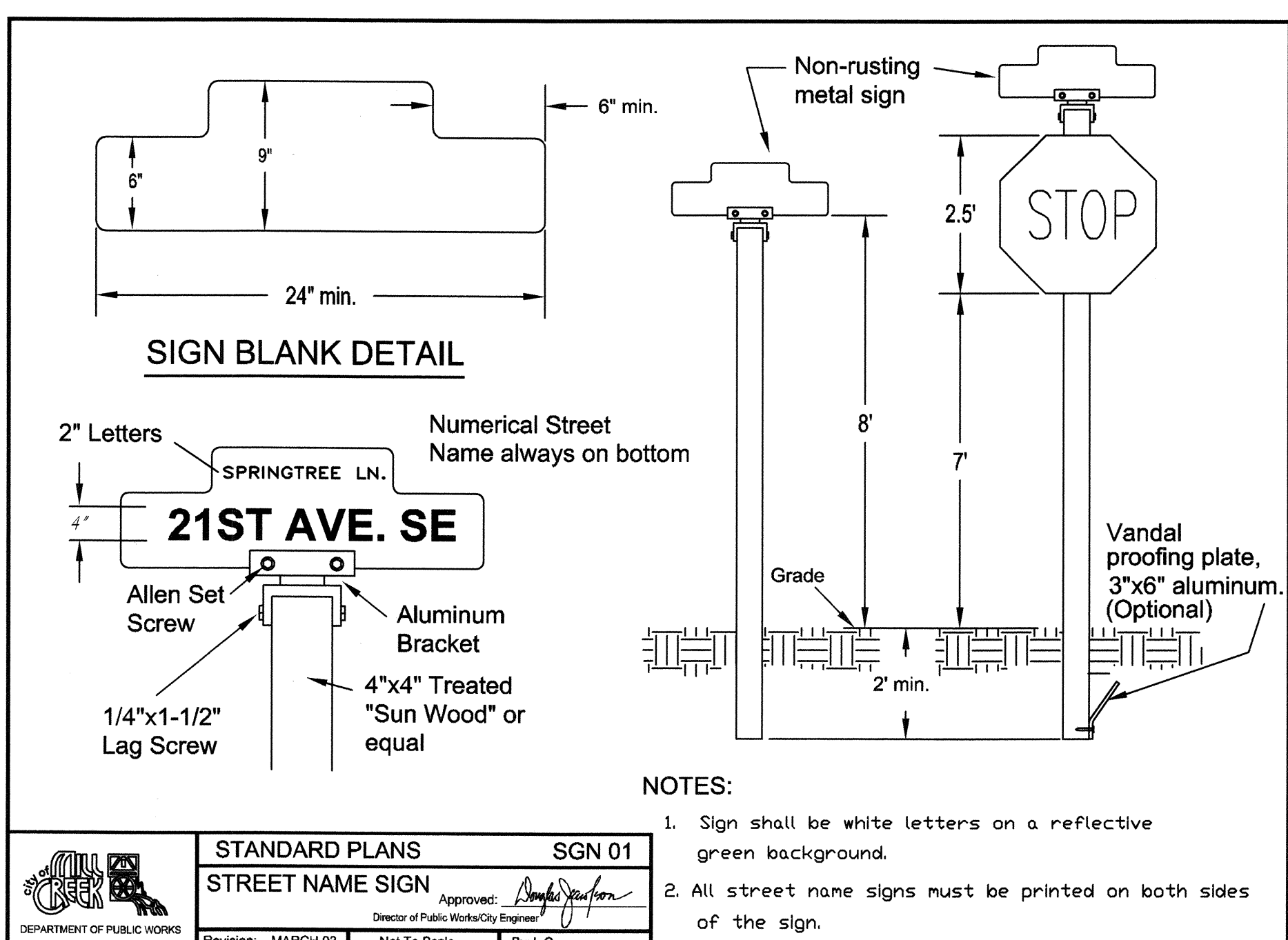
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Page 40

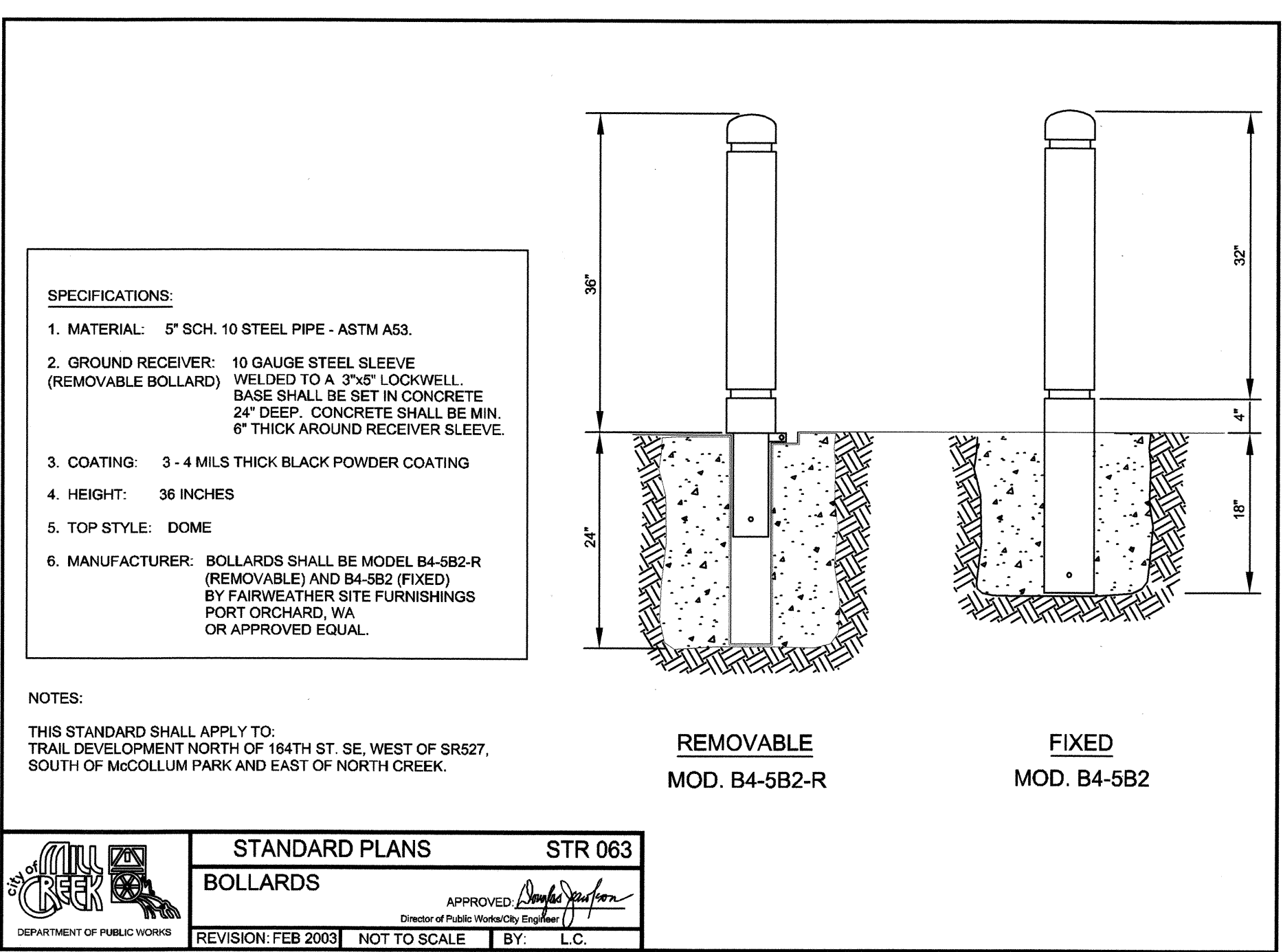


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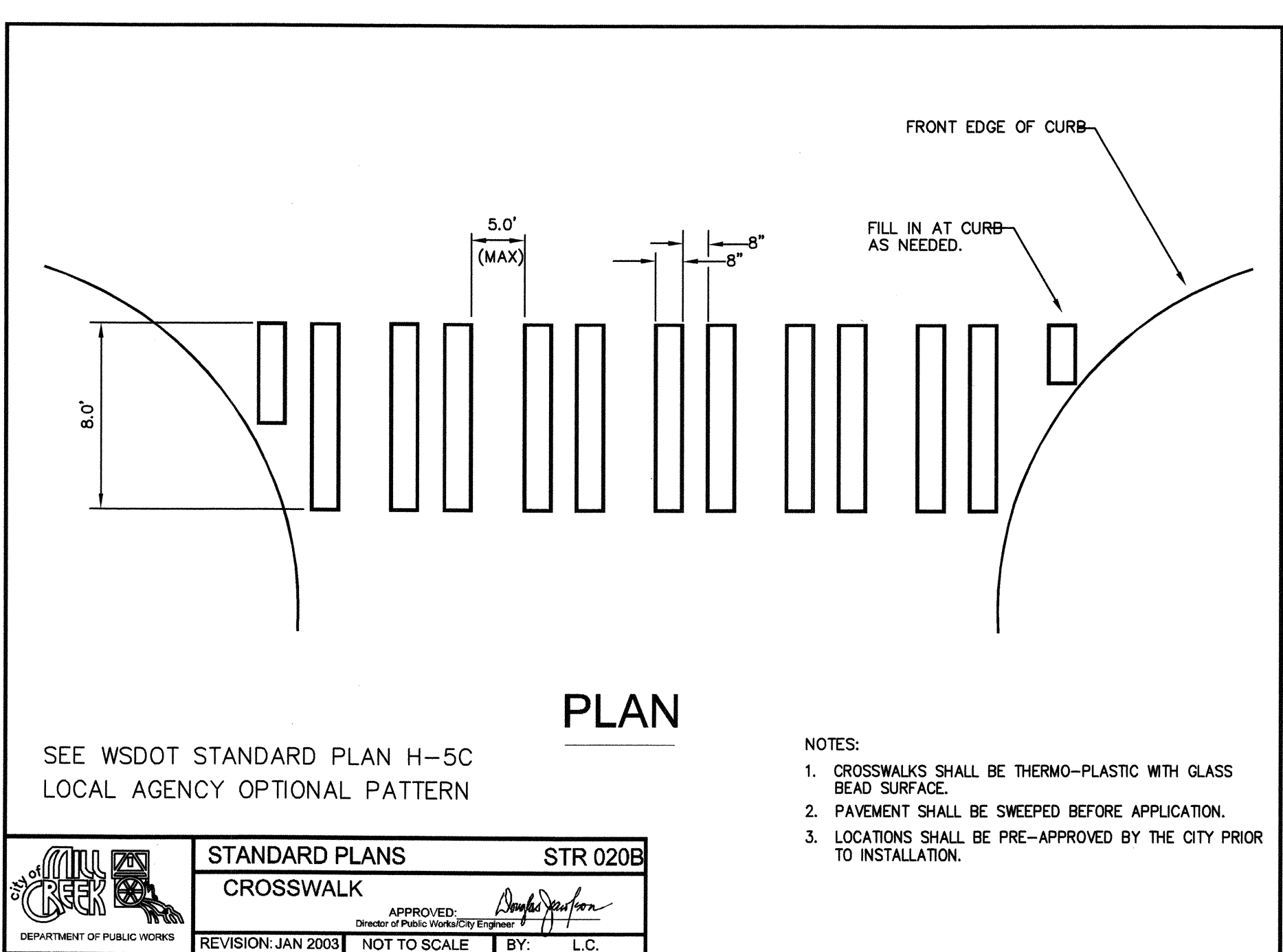


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Page 41

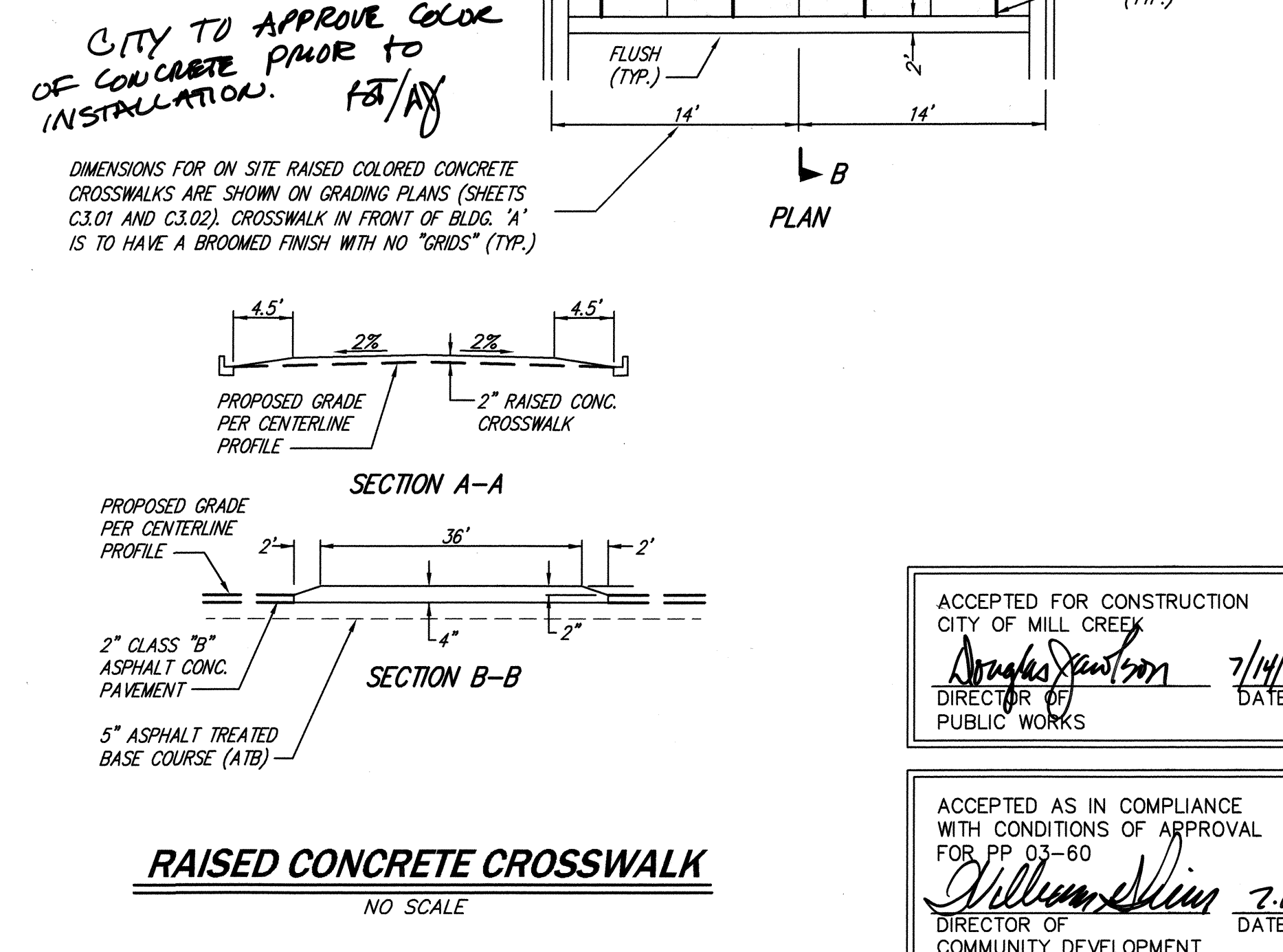


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FINAL_STR_020B.DWG

Page 25



DATE	07.01.04	REVISIONS	NO.	1	PER CITY COMMENTS	07.13.04
DATE	07.13.04	REVISIONS	NO.	2	PER CITY COMMENTS	07.13.04

CITY OF MILL CREEK

14711 NE 29th Place #101
Bellevue, Washington 98007
425.885.7877 Fax 425.885.7963

CORE DESIGN

ENGINEERING • PLANNING • SURVEYING

SITE DETAILS

COTTAGES AT MILL CREEK

WEDGEWOOD AT MILL CREEK, L.L.C.

1203 114th AVENUE S.E.
BELLEVUE, WASHINGTON 98004

DATE	MAY, 2004	DESIGNED	R.H. STEVENS
DRAWN	M. J. STEWART	APPROVED	ROBERT H. STEVENS
SHEET	C3.32	OF	14
PROJECT NUMBER	03037		

ACCEPTED FOR CONSTRUCTION
CITY OF MILL CREEK

[Signature] 7/14/2004
DIRECTOR OF PUBLIC WORKS

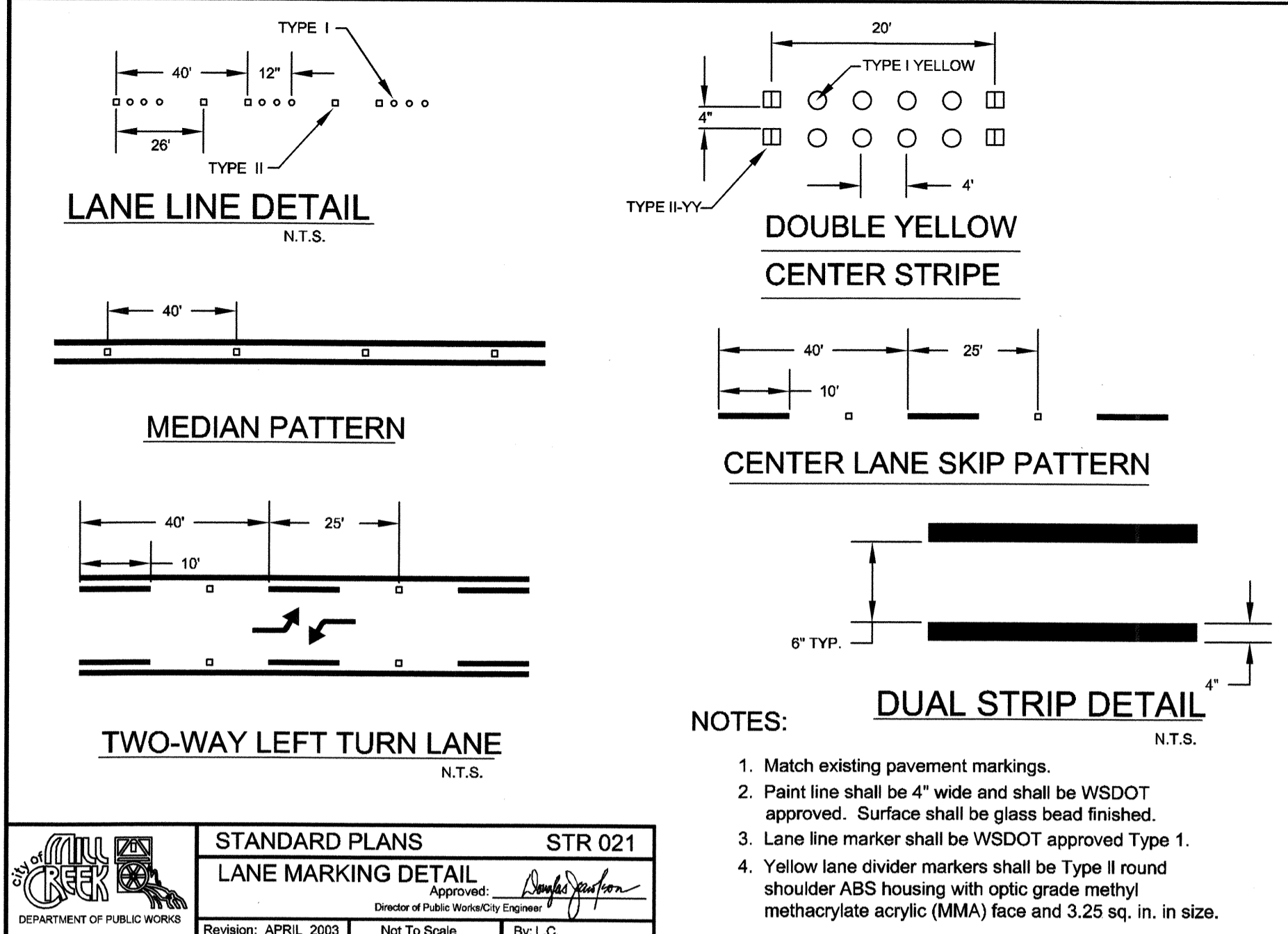
DATE

ACCEPTED AS IN COMPLIANCE
WITH CONDITIONS OF APPROVAL
FOR PP 03-60

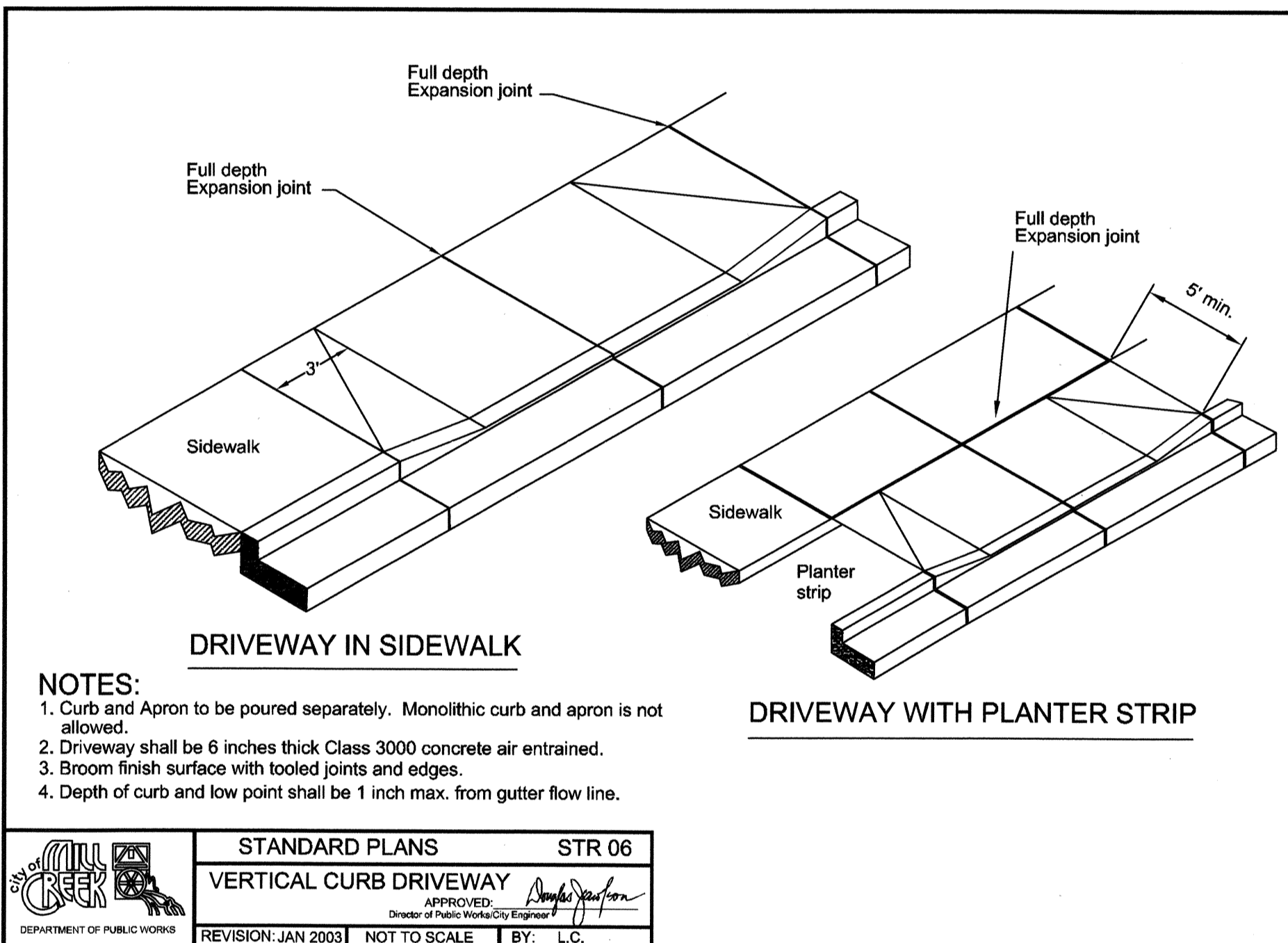
[Signature] 7.15.04
DIRECTOR OF COMMUNITY DEVELOPMENT

DATE

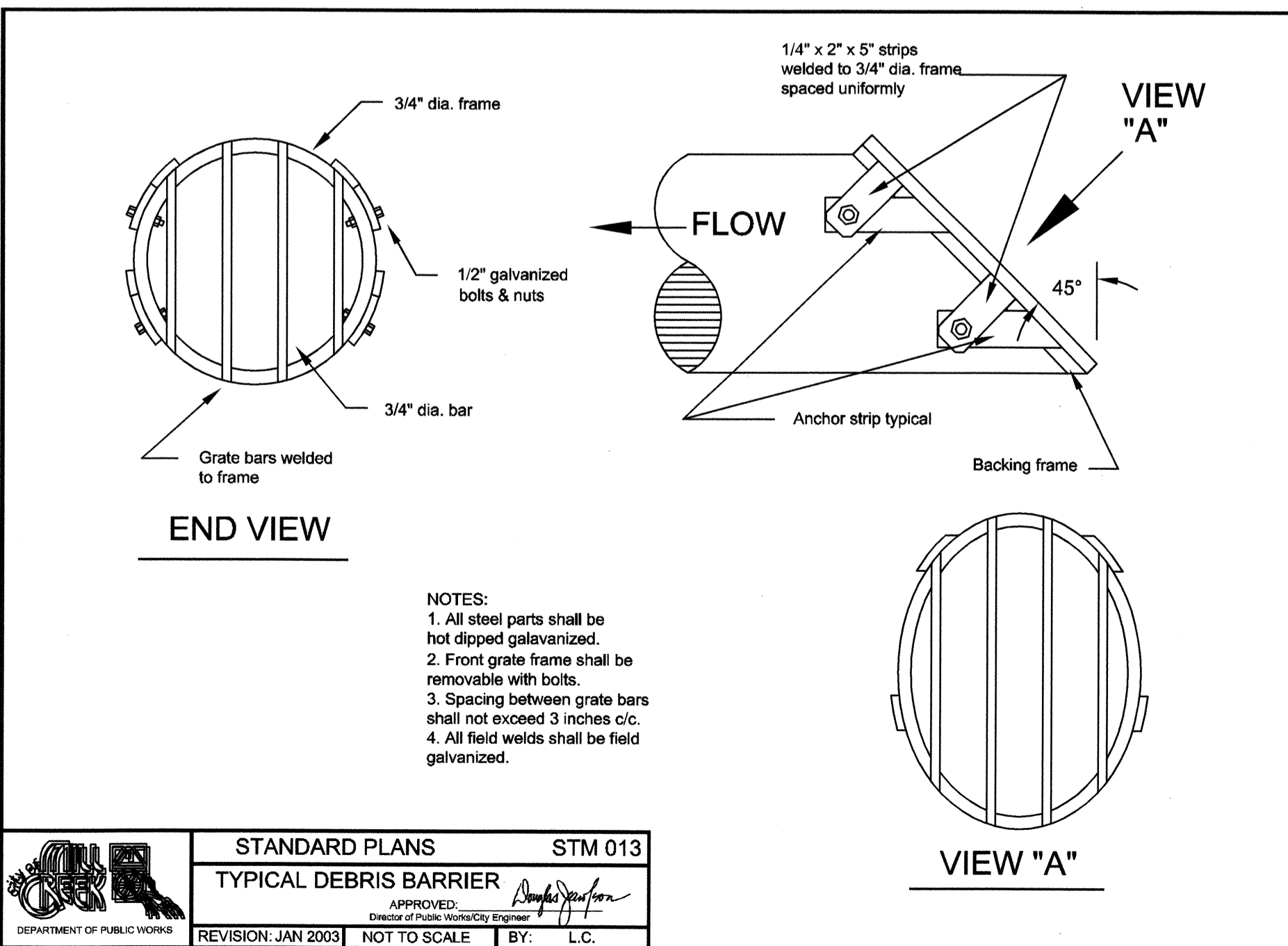
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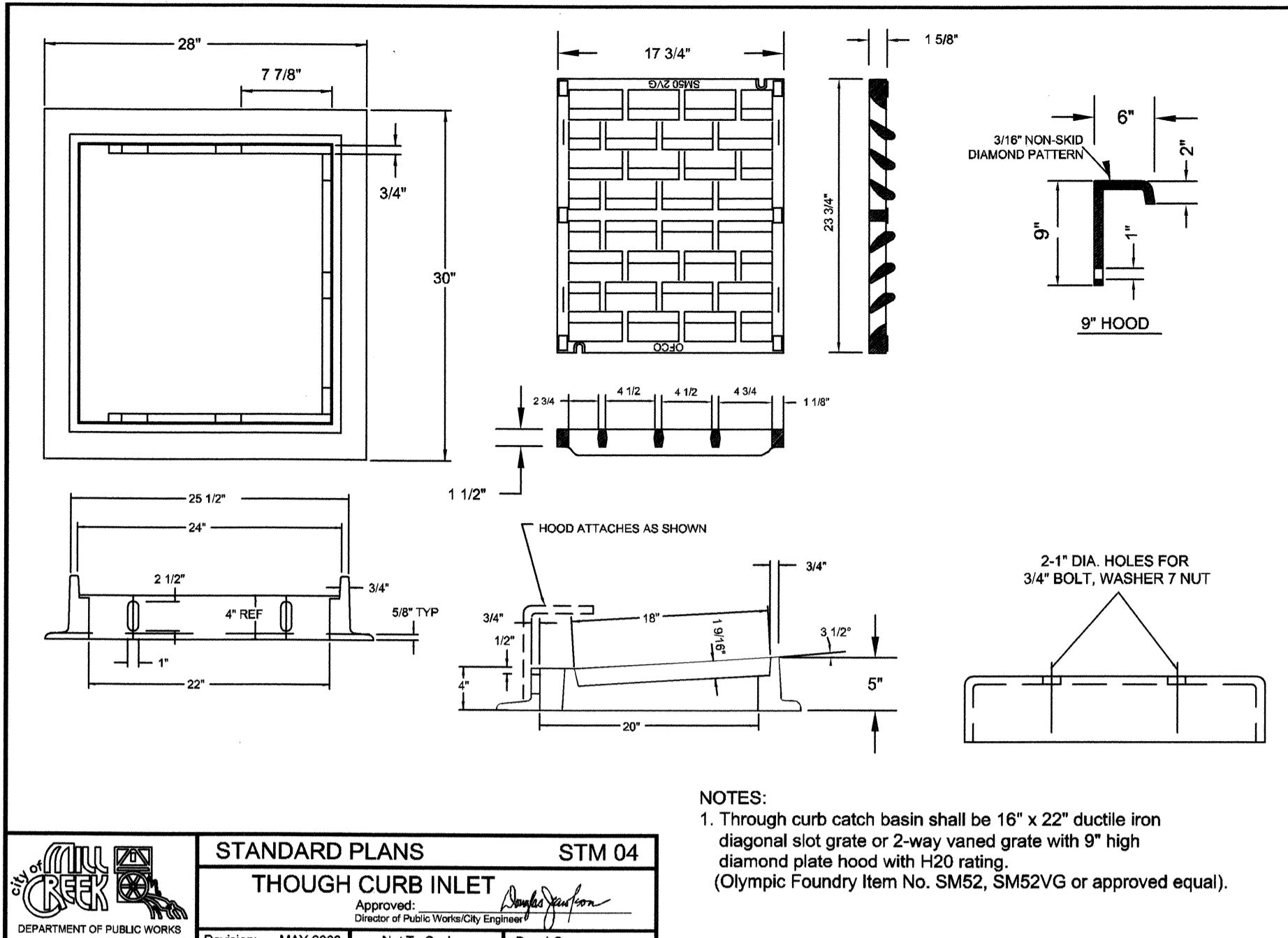
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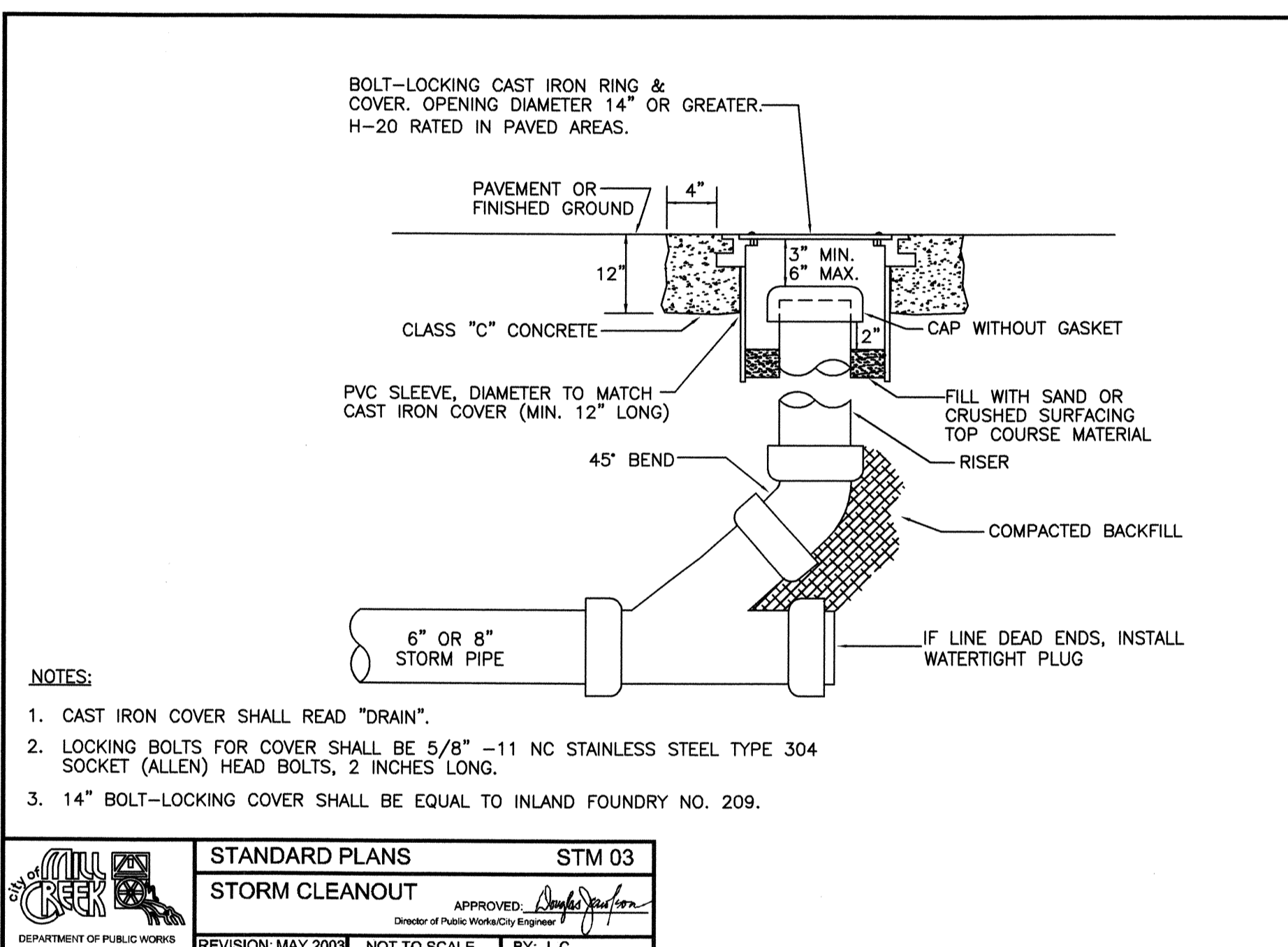
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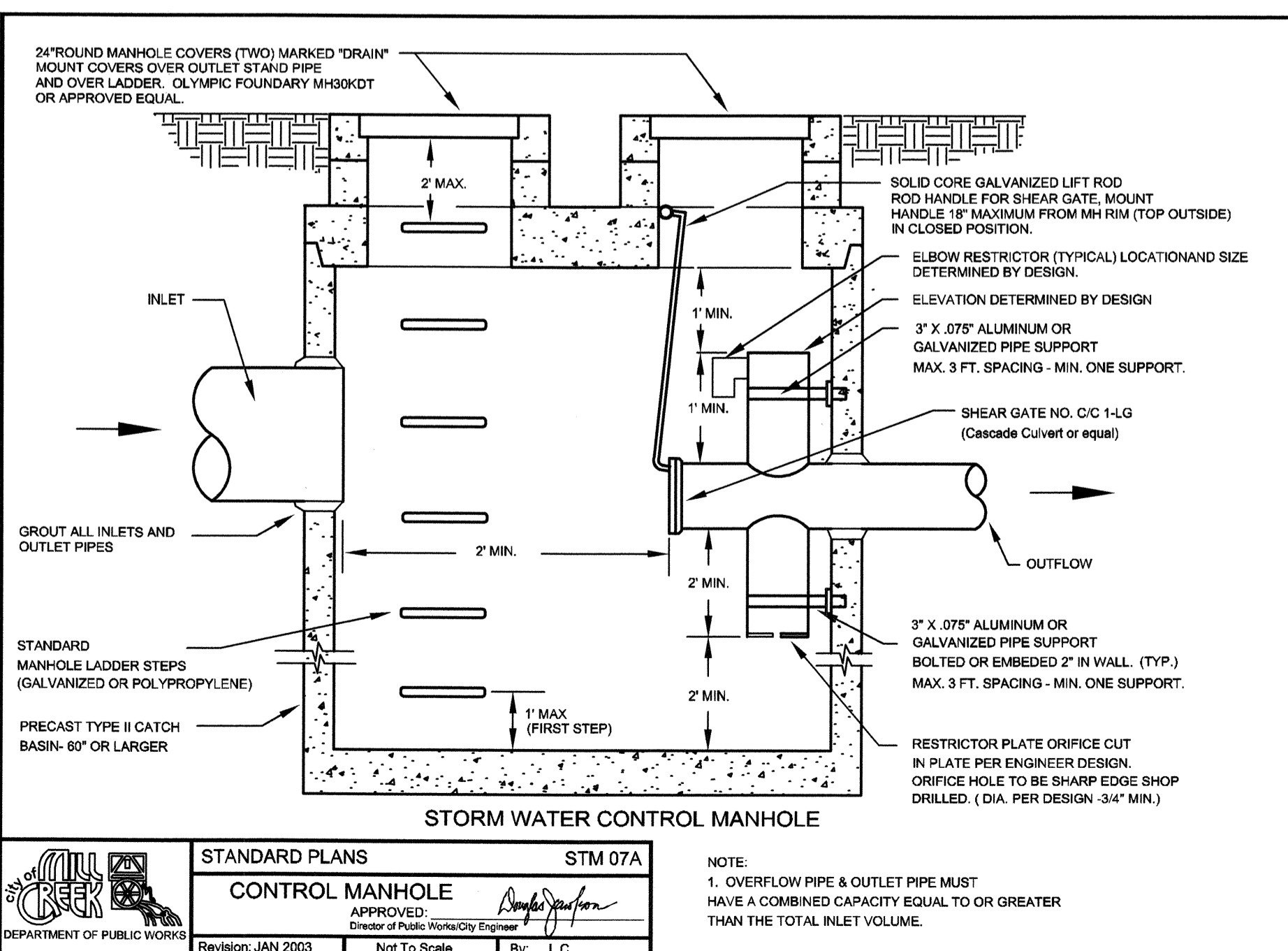
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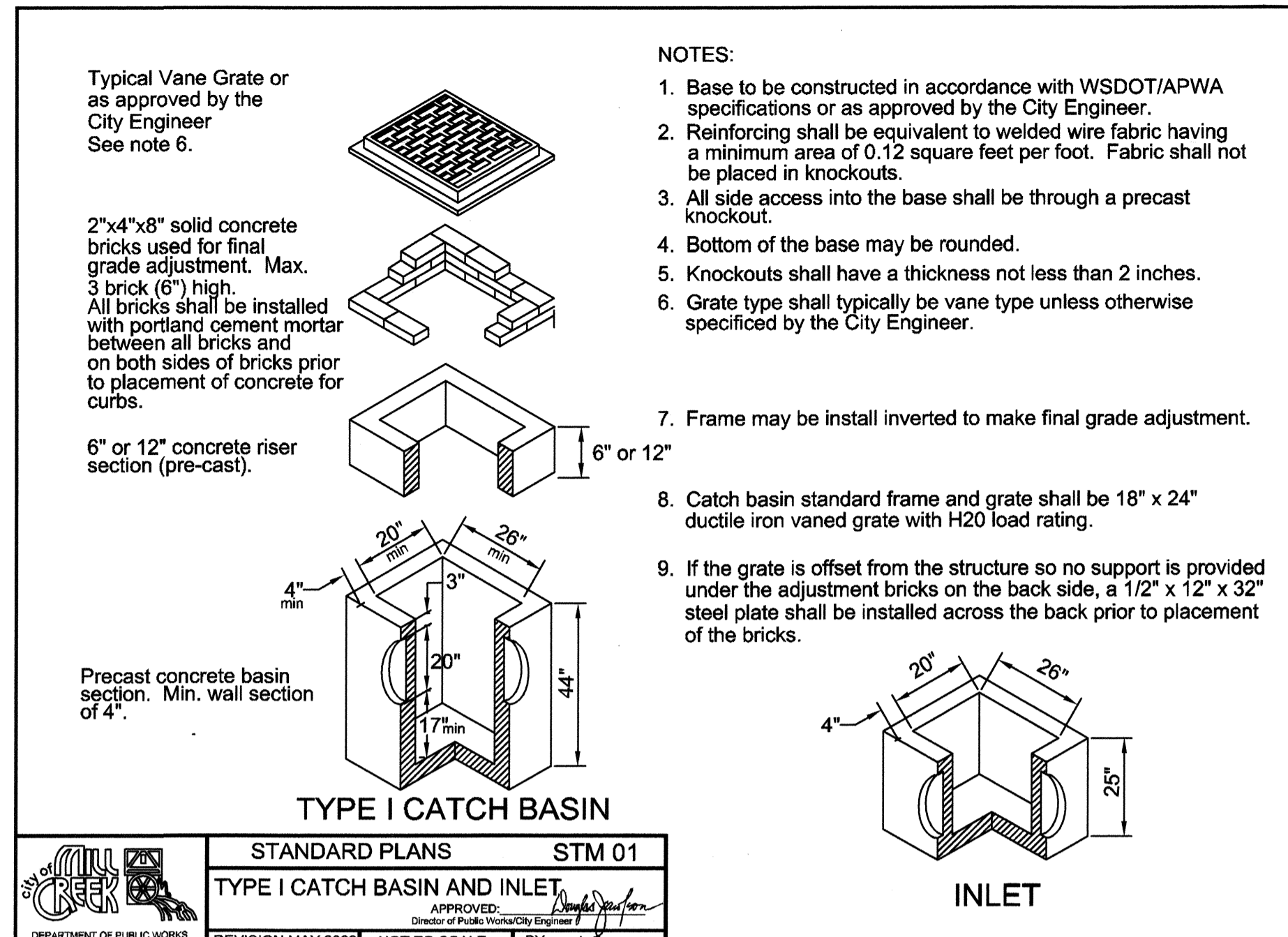
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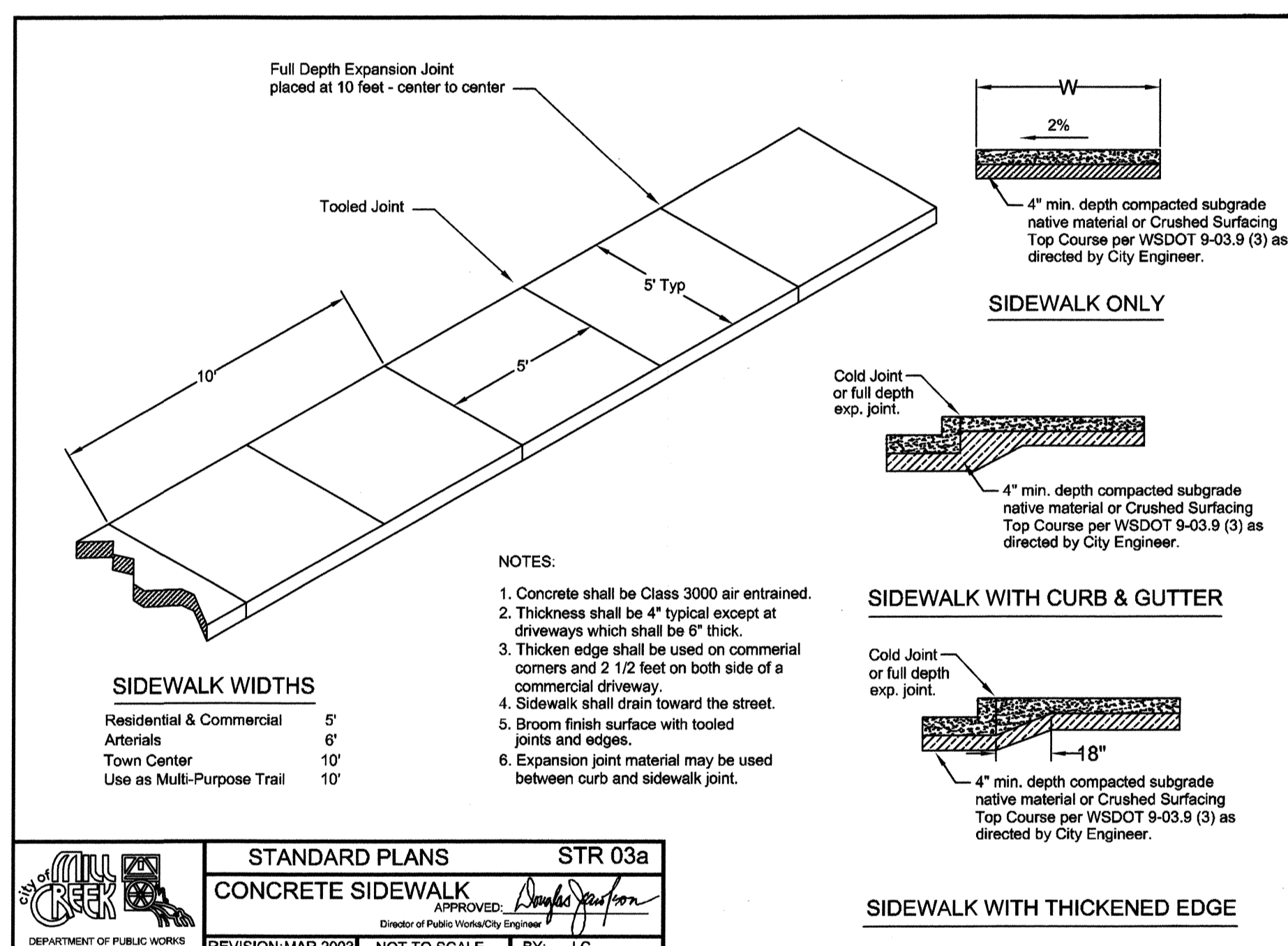
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FINAL_STM_07A.DWG



FINAL_STM_01.DWG



FINAL_STR_03A

ACCEPTED FOR CONSTRUCTION
CITY OF MILL CREEK
DESIGNED: R.H. STEVENS
DRAWN: M. J. STEWART
APPROVED: [Signature]
DIRECTOR OF PUBLIC WORKS
DATE: 7/14/2004

ACCEPTED AS IN COMPLIANCE
WITH CONDITIONS OF APPROVAL
FOR PP 03-60
APPROVED: [Signature]
DIRECTOR OF COMMUNITY DEVELOPMENT
DATE: 2-15-04

DATE	07/01/04	07/13/04
REVISIONS	1	2
PER CITY COMMENTS		
PER CITY COMMENTS		
NO.	1	2
DATE	07-13-04	
DESIGNED	R.H. STEVENS	
DRAWN	M. J. STEWART	
APPROVED	[Signature]	
DIRECTOR OF PUBLIC WORKS		
DATE	7/14/2004	
DESIGNED	R.H. STEVENS	
DRAWN	M. J. STEWART	
APPROVED	[Signature]	
DIRECTOR OF COMMUNITY DEVELOPMENT		
DATE	2-15-04	
SHEET	C3.33	OF 14
PROJECT NUMBER	03037	

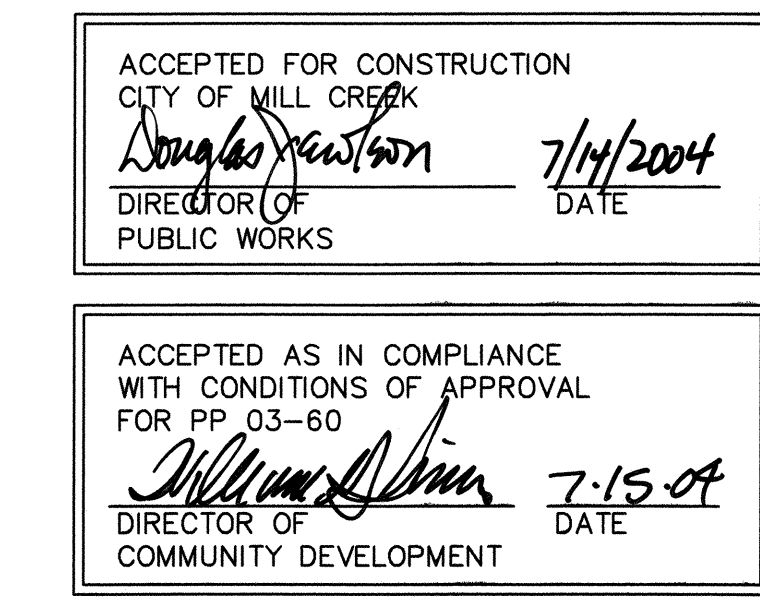
COTTAGES AT MILL CREEK
WEDGEWOOD AT MILL CREEK, L.L.C.
1203 714th AVENUE S.E.
BELLEVUE, WASHINGTON 98004

ENGINEERING · PLANNING · SURVEYING

CORE DESIGN

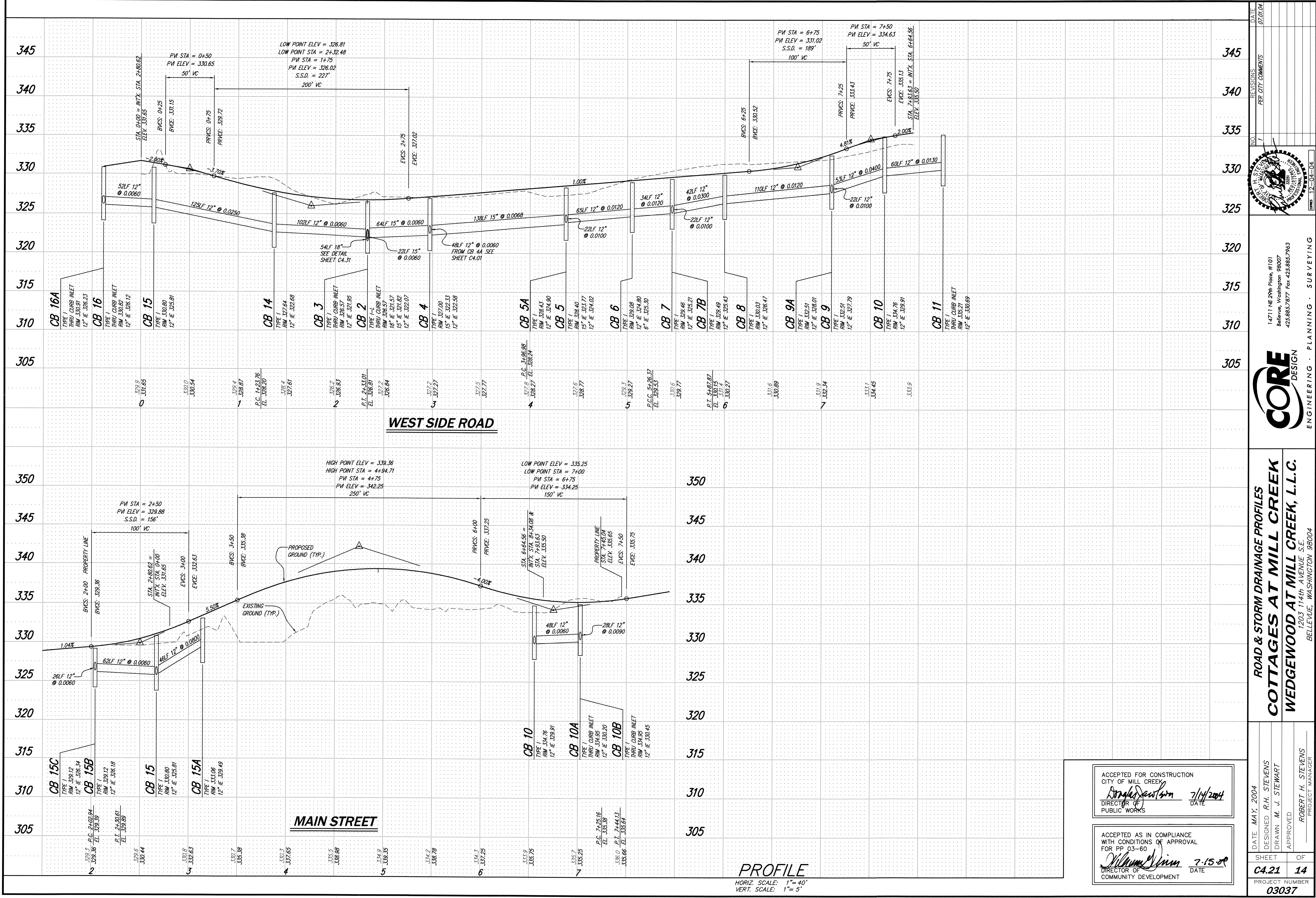
14711 NE 29th Place, #101
Bellevue, Washington 98007
425.885.7877 Fax 425.885.7963

DEV-2363

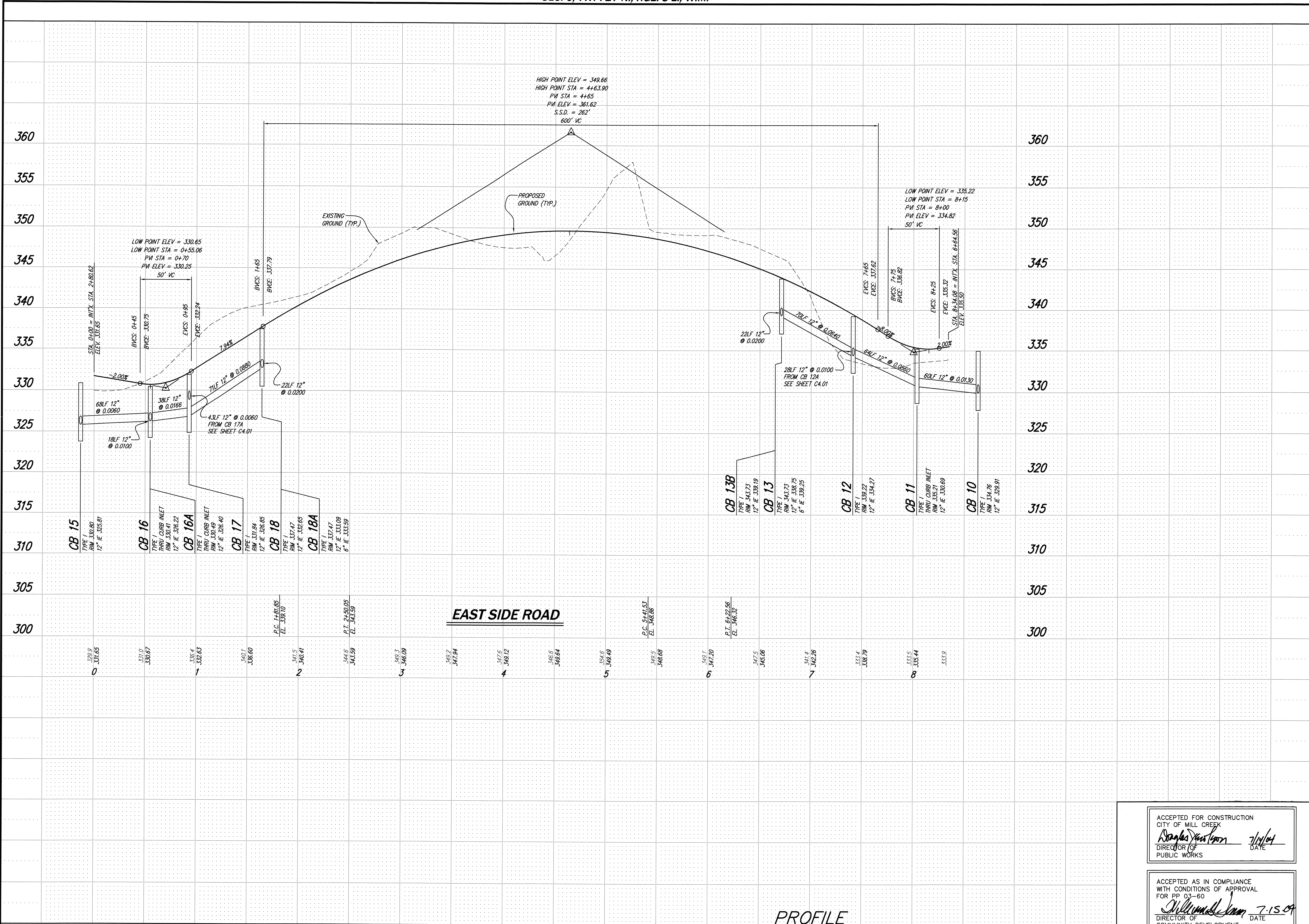


A north arrow pointing upwards with the letter 'N' in the center. Below the arrow is a graphic scale bar with markings at 0, 20, 40, and 80 feet.

PROJECT NUMBER
HDEV-2364

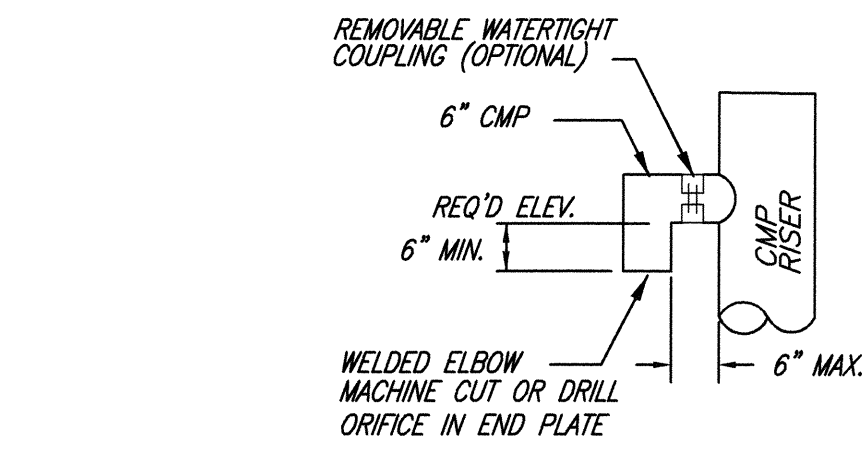


DATE: MAY, 2004		DESIGNED: R.H. STEVENS		DRAWN: M. J. STEWART	
SHEET: C4.21		OF: 14		PROJECT NUMBER: 03037	
PROJECT MANAGER: ROBERT H. STEVENS		APPROVED: [Signature] DATE: 7/15/2004			
ACCEPTED AS IN COMPLIANCE WITH CONDITIONS OF APPROVAL FOR PP 03-60					
ACCEPTED FOR CONSTRUCTION CITY OF MILL CREEK [Signature] DATE: 7/14/2004					
DIRECTOR OF PUBLIC WORKS					
DIRECTOR OF COMMUNITY DEVELOPMENT					
REVISIONS: NO. 1 PER CITY COMMENTS					
DATE: 07/01/04					
14711 NE 29th Place, #101 Bellevue, Washington 98007 425.885.7877 Fax 425.885.7963					
CORE DESIGN ENGINEERING • PLANNING • SURVEYING					
ROAD & STORM DRAINAGE PROFILES COTTAGES AT MILL CREEK WEDGEWOOD AT MILL CREEK, L.L.C. 1203 114th AVENUE S.E. BELLEVUE, WASHINGTON 98004					
HDEV-2365					

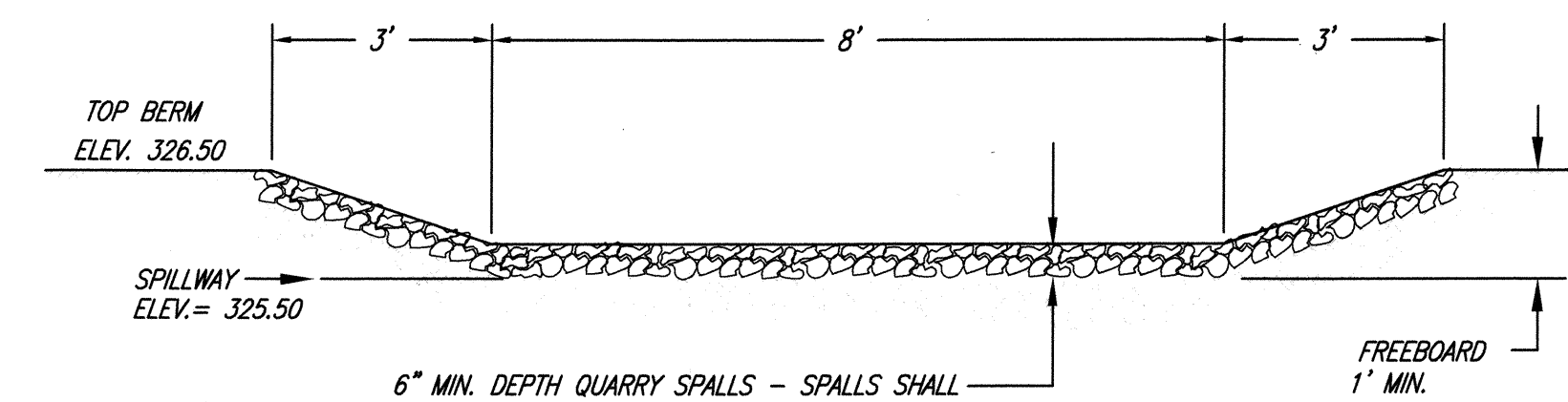


DATE MAY, 2004		DESIGNED R.H. STEVENS		SHEET C4.22		OF 14	
DRAWN M. J. STEWART		APPROVED		PROJECT NUMBER 03037			
DIRECTOR OF PUBLIC WORKS		DIRECTOR OF COMMUNITY DEVELOPMENT		PROJECT MANAGER			
DATE 7/14/04		DATE 7-15-04					
ACCEPTED FOR CONSTRUCTION CITY OF MILL CREEK		ACCEPTED AS IN COMPLIANCE WITH CONDITIONS OF APPROVAL FOR PP 03-60					
ROBERT H. STEVENS		ROBERT H. STEVENS					
14711 NE 29th Place, #101 Bellevue, Washington 98007 425.885.7877 Fax 425.885.7963		CORE DESIGN ENGINEERING · PLANNING · SURVEYING					
ROAD & STORM DRAINAGE PROFILES COTTAGES AT MILL CREEK WEDGEWOOD AT MILL CREEK, L.L.C. 1203 114th AVENUE S.E. BELLEVUE, WASHINGTON 98004							
REVISIONS		NO.		DATE		PER CITY COMMENTS	
1		1		07-01-04			

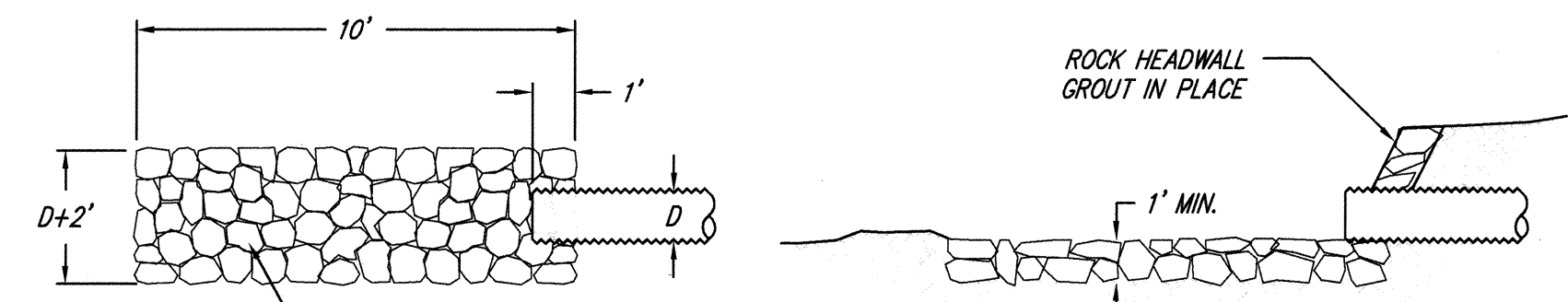
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NO SCALE

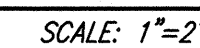
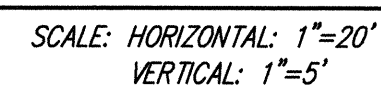


NO SCALE



NO SCALE

SCALE: 1"=20'





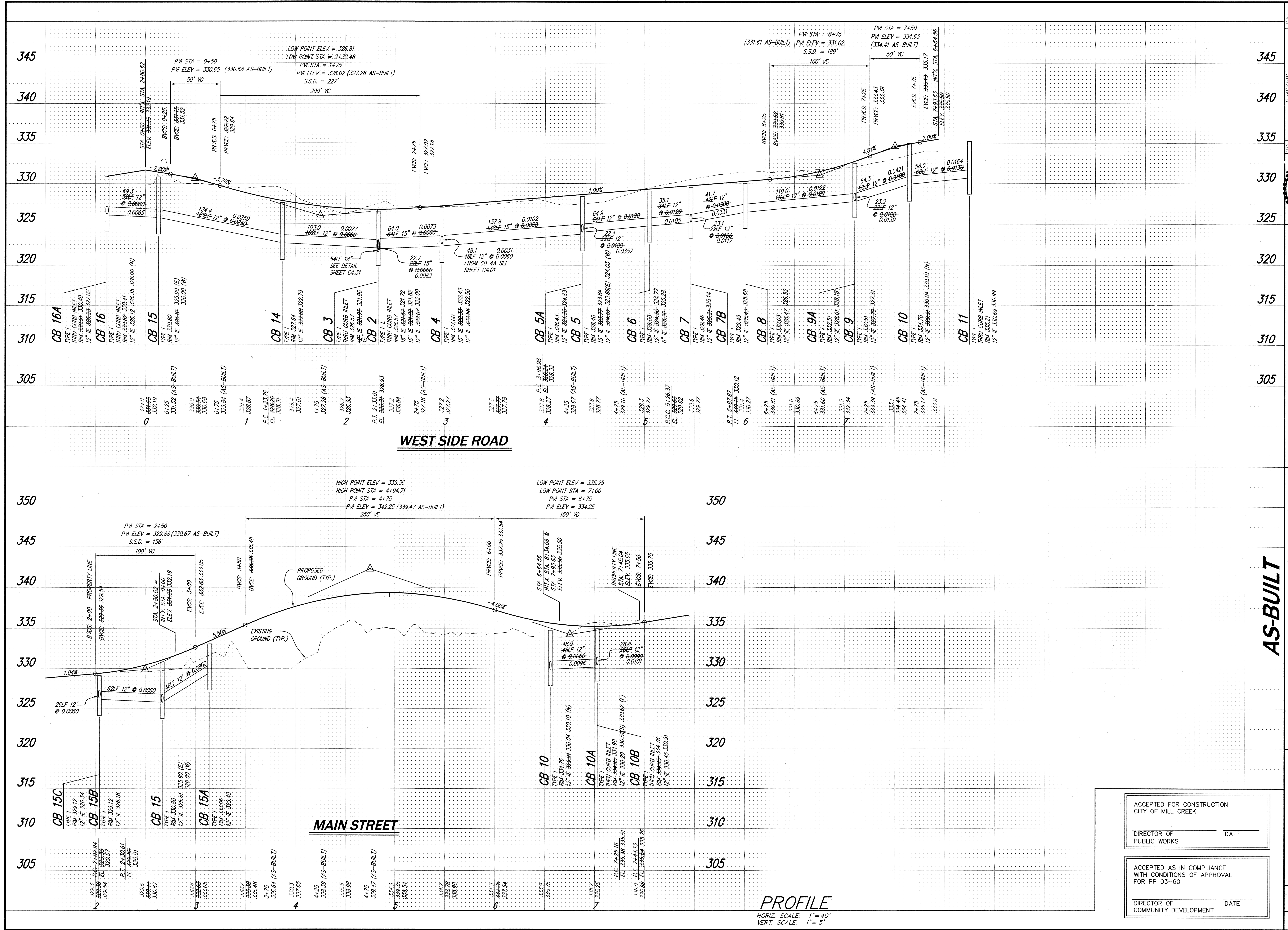
- NOTES:**
1. USE A MINIMUM OF A 72" DIAMETER TYPE 2 CATCH BASIN.
 2. OUTLET CAPACITY: 100-YEAR DEVELOPED PEAK FLOW
 3. SEE CITY OF MILL CREEK STD. PLAN STM07A FOR REFERENCE ON SHEET C3.33.

ACCEPTED FOR CONSTRUCTION
CITY OF MILL CREEK
Douglas Pearson 7/14/2004
DIRECTOR OF PUBLIC WORKS DATE

ACCEPTED AS IN COMPLIANCE
WITH CONDITIONS OF APPROVAL
FOR PP 03-60

William L. Linn 7-17-04
DIRECTOR OF DATE
COMMUNITY DEVELOPMENT

DATE: MAY, 2004		STORM DETENTION DETAILS		<div> CORE DESIGN ENGINEERING · PLANNING · SURVEYING</div>		<div></div>			
DESIGNED R.H. STEVENS		COTTAGES AT MILL CREEK						14711 NE 29th Place, #101 Bellevue, Washington 98007	
DRAWN M. J. STEWART		WEDGEWOOD AT MILL CREEK, L.L.C.						425.8865-7877 Fax 425.8865-7963	
APPROVED		1203 114th AVENUE S.E. BELLEVUE, WASHINGTON 98004							
PROJECT NUMBER		03037				PER CITY COMMENTS			



DATE	DESIGNED	DRAWN	APPROVED	PROJECT NUMBER
MAY, 2004	R.H. STEVENS	M. J. STEWART	ROBERT H. STEVENS	03037
SHEET 42.21 OF 14				
PROJECT NUMBER 03037				

ACCEPTED FOR CONSTRUCTION
CITY OF MILL CREEK

DIRECTOR OF PUBLIC WORKS _____ DATE _____

ACCEPTED AS IN COMPLIANCE
WITH CONDITIONS OF APPROVAL
FOR PP 03-60

DIRECTOR OF COMMUNITY DEVELOPMENT _____ DATE _____

CORE DESIGN

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14711 NE 29th Place, #101
Bellevue, Washington 98007
425.885.7877 Fax 425.885.7963

ROAD & STORM DRAINAGE PROFILES

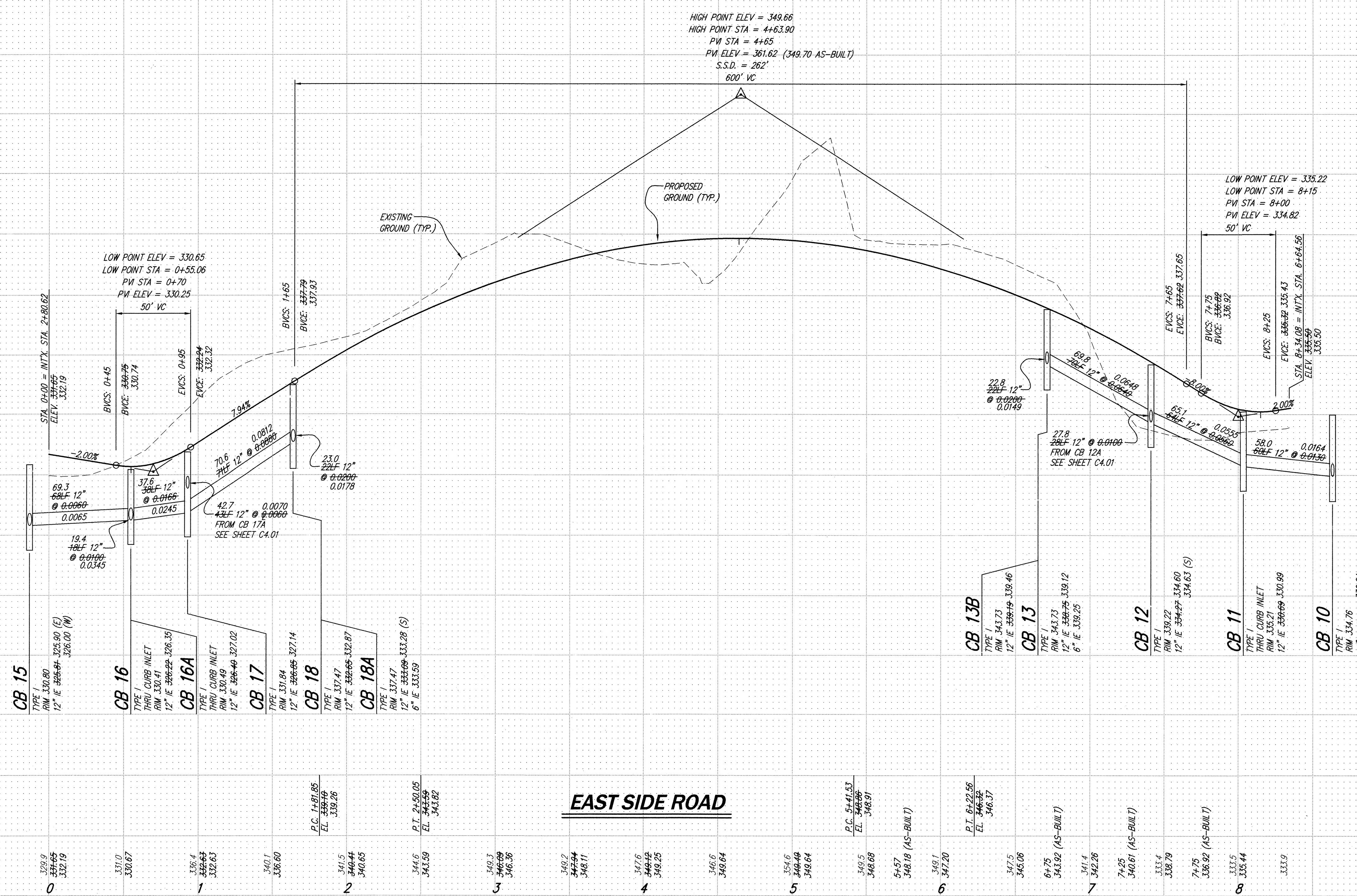
COTTAGES AT MILL CREEK

WEDGEWOOD AT MILL CREEK, L.L.C.

1203 114th AVENUE S.E.
BELLEVUE, WASHINGTON 98004

360
355
350
345
340
335
330
325
320
315
310
305
300

360
355
350
345
340
335
330
325
320
315
310
305
300



EAST SIDE ROAD

PROFILE
HORIZ. SCALE: 1"=40'
VERT. SCALE: 1"=5'

ACCEPTED FOR CONSTRUCTION CITY OF MILL CREEK	
DIRECTOR OF PUBLIC WORKS	DATE
ACCEPTED AS IN COMPLIANCE WITH CONDITIONS OF APPROVAL FOR PP 03-60	
DIRECTOR OF COMMUNITY DEVELOPMENT	DATE

AS-BUILT

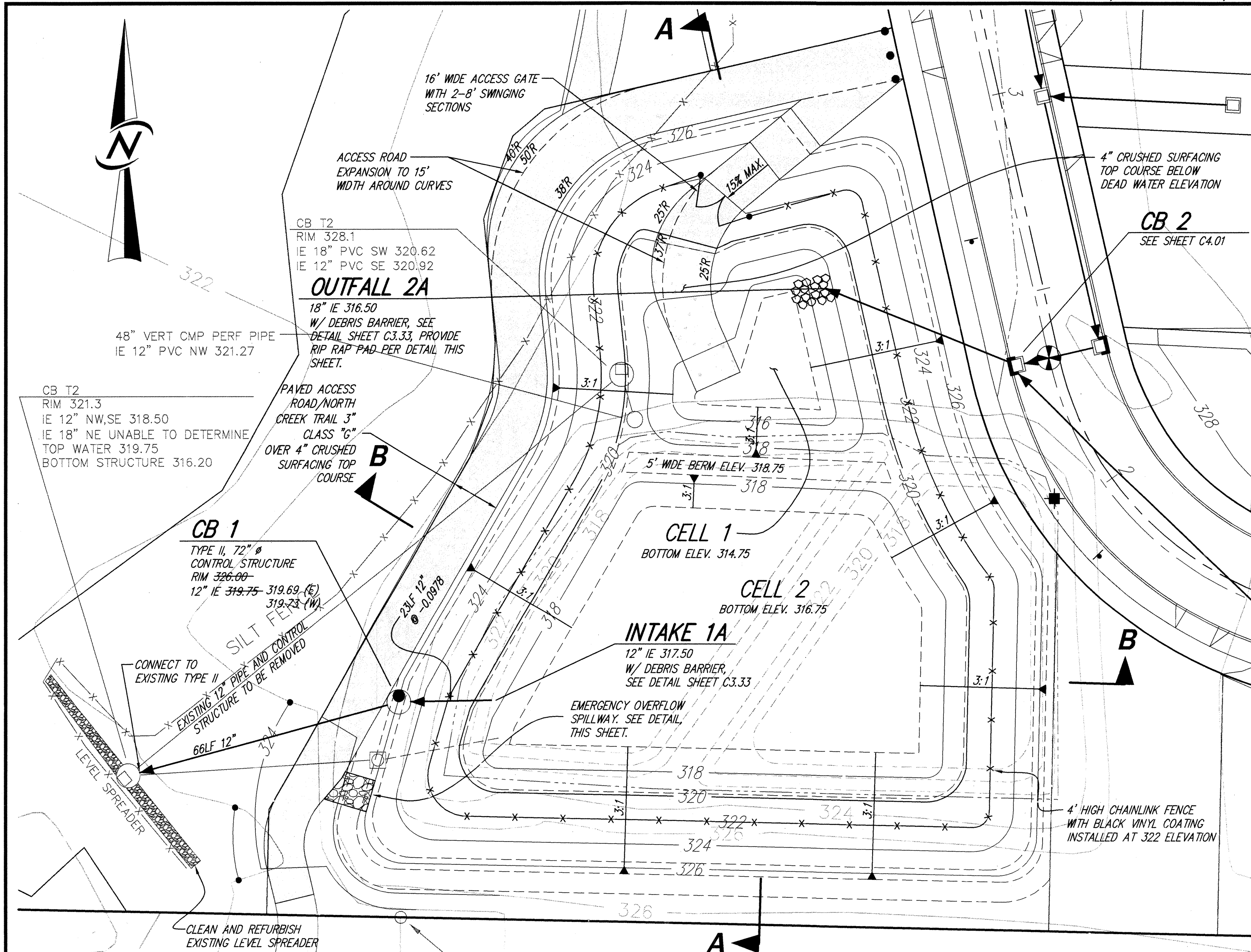
**ROAD & STORM DRAINAGE PROFILES
COTTAGES AT MILL CREEK
WEDGEWOOD AT MILL CREEK, L.L.C.**

DATE: MAY, 2004	DESIGNED: R.H. STEVENS
DRAWN: M. J. STEWART	APPROVED: ROBERT H. STEVENS
SHEET: C4.22	OF: 14
PROJECT NUMBER: 03037	

CORE DESIGN
ENGINEERING • PLANNING • SURVEYING

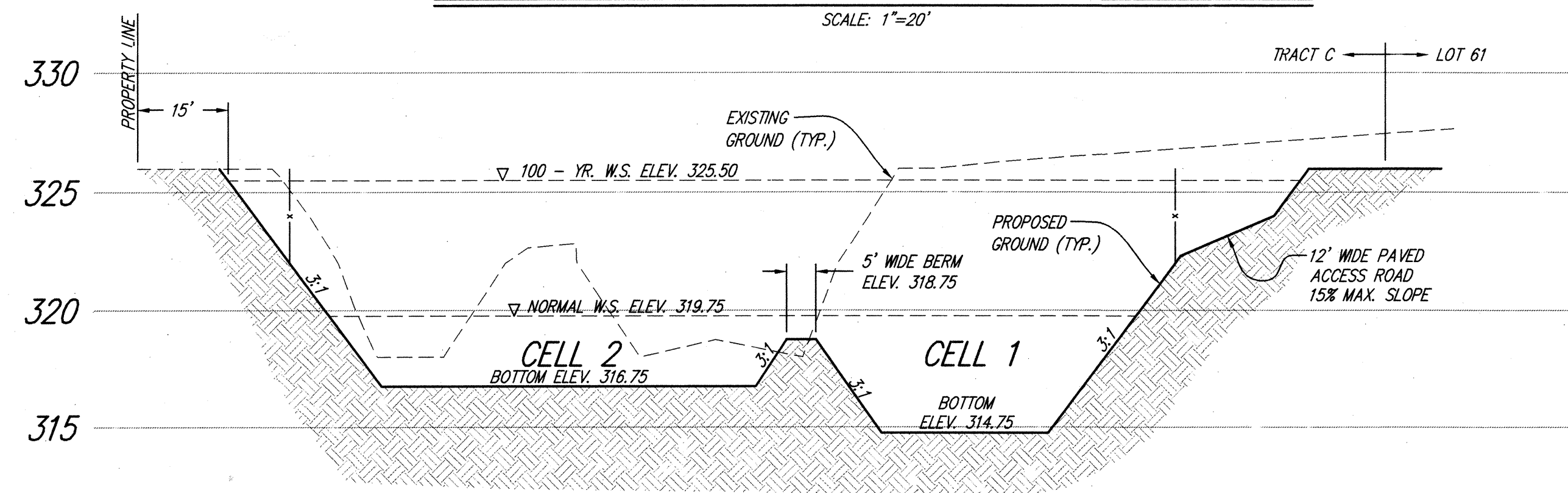
14711 NE 29th Place, #101
Bellevue, Washington 98007
425.885.7877 Fax 425.865.7963

NO.	REVISIONS	DATE
1	PER CITY COMMENTS	07/01/04
2	AS-BUILT	12-7-04



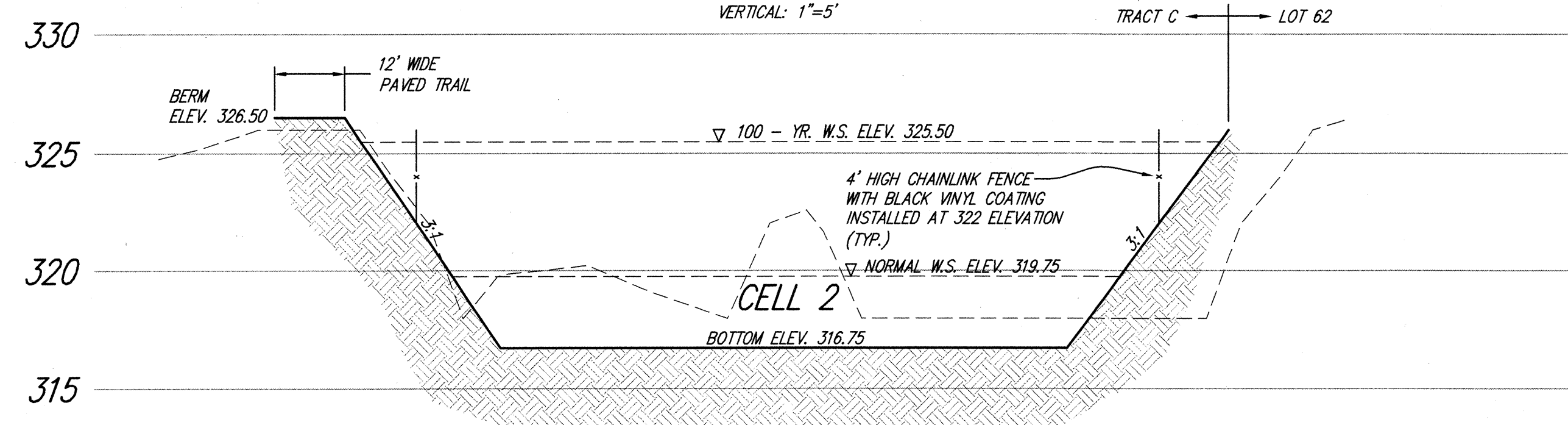
DETENTION/WATER QUALITY POND PLAN VIEW

SCALE: 1"=20'



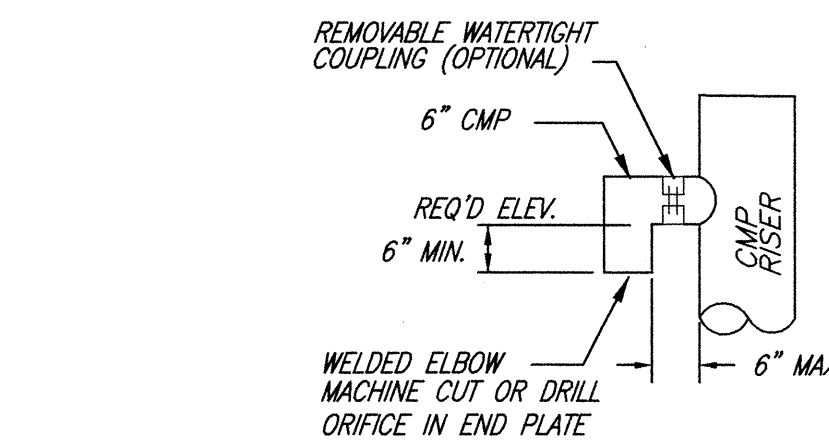
POND CROSS-SECTION A-A

SCALE: HORIZONTAL: 1"=20'
VERTICAL: 1"=5'



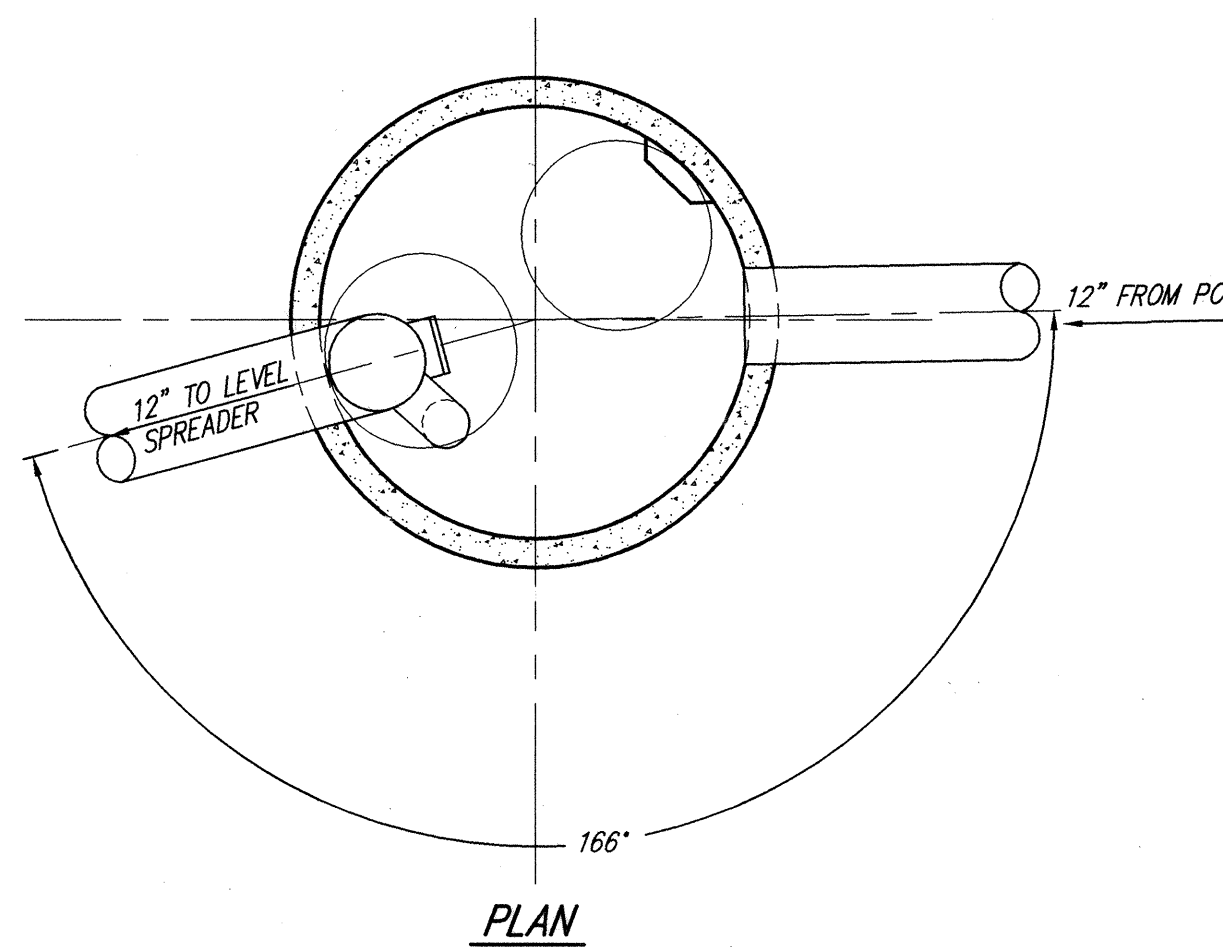
POND CROSS-SECTION B-B

SCALE: HORIZONTAL: 1"=20'
VERTICAL: 1"=5'

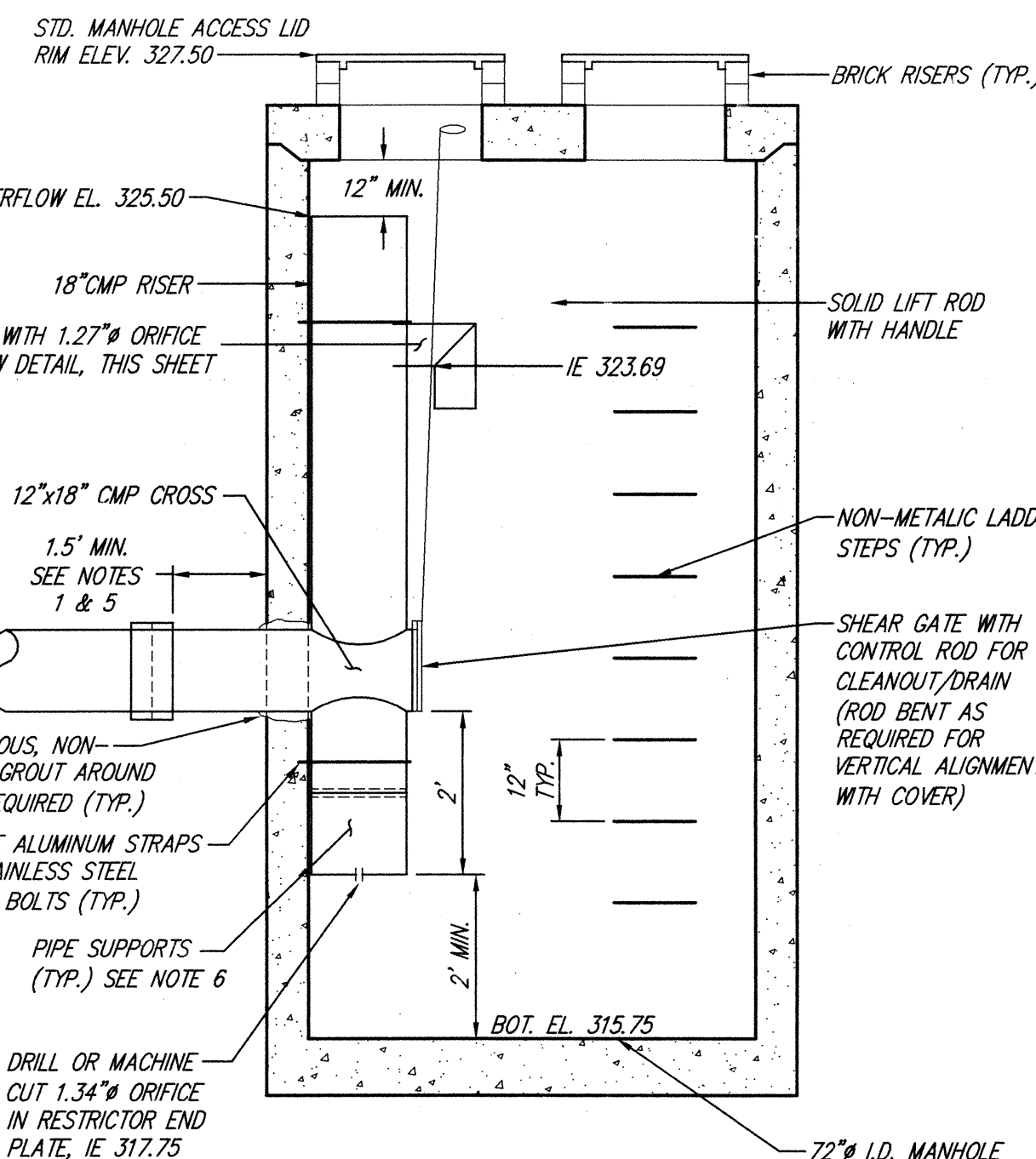


ELBOW DETAIL

NO SCALE



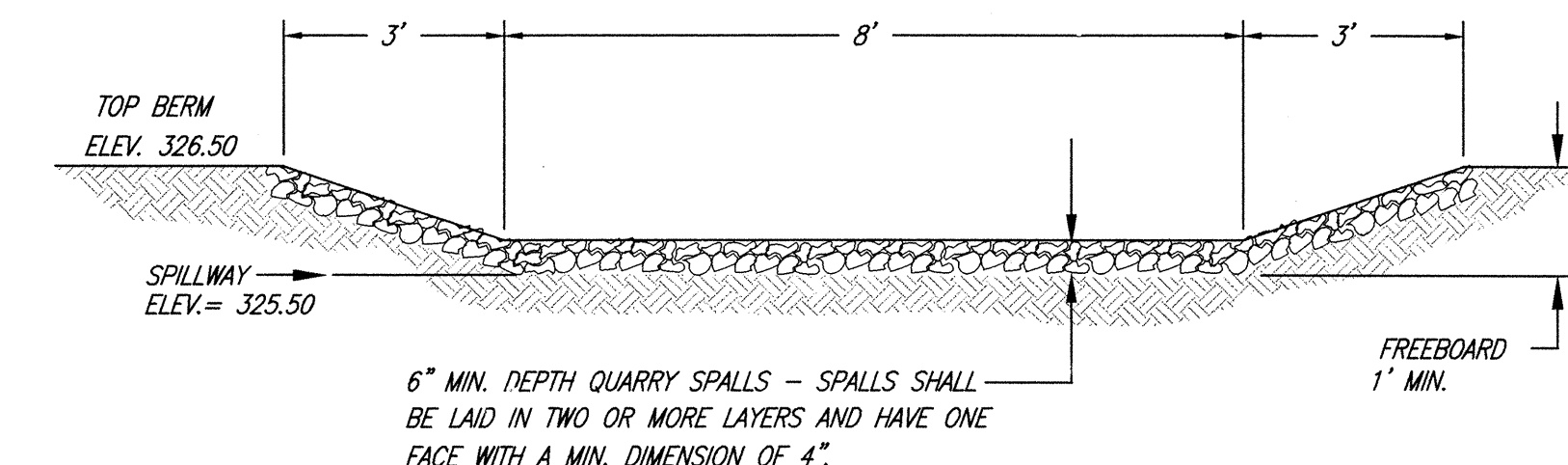
PLAN



CB 1 CONTROL STRUCTURE DETAIL

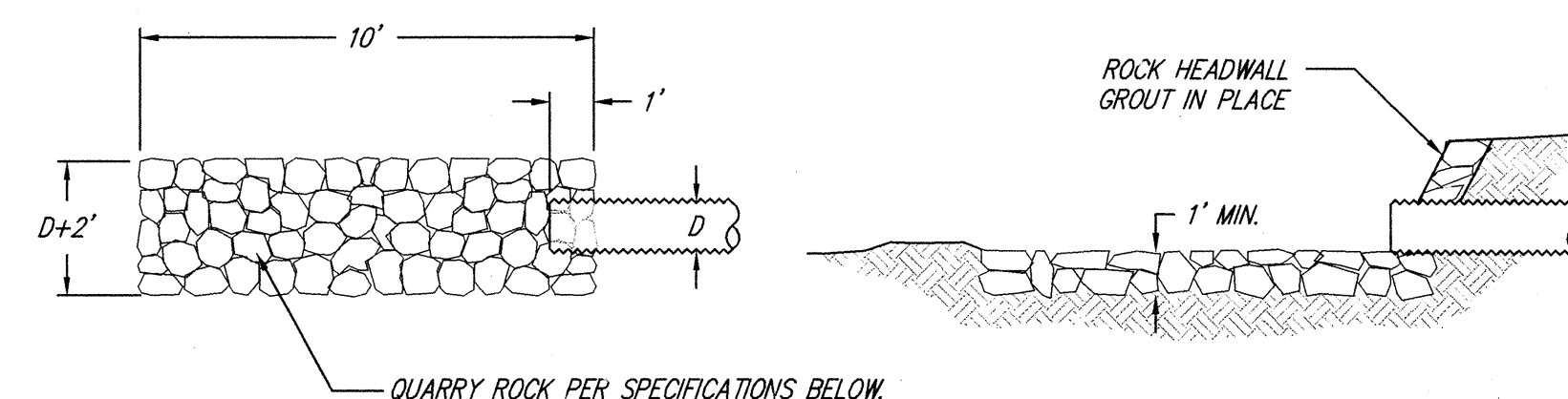
SCALE: 1"=2'

- NOTES:
1. USE A MINIMUM OF A 72" DIAMETER TYPE 2 CATCH BASIN.
 2. OUTLET CAPACITY: 100-YEAR DEVELOPED PEAK FLOW
 3. SEE CITY OF MILL CREEK STD. PLAN 5707A FOR REFERENCE ON SHEET C3.33.



EMERGENCY SPILLWAY DETAIL

NO SCALE



OUTFALL RIP-RAP DETAIL

NO SCALE

ACCEPTED FOR CONSTRUCTION
CITY OF MILL CREEK

DIRECTOR OF PUBLIC WORKS DATE

ACCEPTED AS IN COMPLIANCE
WITH CONDITIONS OF APPROVAL
FOR PP 03-60

DIRECTOR OF COMMUNITY DEVELOPMENT DATE

DATE	REVISIONS	NO.	PER CITY COMMENTS	PER CITY COMMENTS	AS-BUILT
07/01/04	1	1			
07/01/04	2	2			
07/01/04	3	3			
07/01/04	4	4			
07/01/04	5	5			
07/01/04	6	6			
07/01/04	7	7			
07/01/04	8	8			
07/01/04	9	9			
07/01/04	10	10			

14711 NE 29th Place, #101
Bellevue, Washington 98007
425.885.7877 Fax 425.885.7963

CORE
DESIGN
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AS-BUILT

STORM DETENTION DETAILS
COTTAGES AT MILL CREEK
WEDGEWOOD AT MILL CREEK, L.L.C.
1203 114th AVENUE S.E.
BELLEVUE, WASHINGTON 98004

DATE MAY, 2004	DESIGNED R.H. STEVENS	DRAWN M. J. STEWART	APPROVED ROBERT H. STEVENS	PROJECT MANAGER
SHEET	OF	C4.31	14	PROJECT NUMBER 03037

AS-BUILTS WOODSIDE WALK

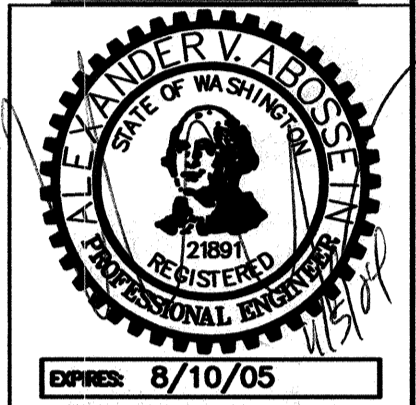
HDEV.2371

Abossein
Engineering

MECHANICAL - ELECTRICAL
FIRE PROTECTION - ENERGY

1844 114th AVE. NE
Bellevue, Wa. 98004

(425) 462-9441
FAX: 462-9451
E-Mail: general@abossein.com



THE COTTAGES AT
MILL CREEK
MILL CREEK, WA

SHEET TITLE:
GENERAL NOTES
AND DETAILS

Revisions:
City Comments 11-5-04

Job No.: 24103
Date: 10/27/04

E1
(OF 5)

LIGHTING FIXTURES

⊕ LIGHT FIXTURE (SEE FIXTURE
SCHEDULE FOR TYPE)

MARKERS

- △ FLAG NOTE
- ⊗ FIXTURE TYPE
- ⊗ DETAIL
- ⊗ EQUIPMENT TYPE
- ⊗ EQUIPMENT TYPE
- ⊕ NOTE
- △ REVISION

RACEWAY

— HOMERUN TO PANEL
P1-5 (INDICATES PANEL AND CIRCUIT NUMBER)

----- UNDERGROUND CONDUIT

ELECTRICAL GENERAL NOTES:

- 1) THE ELECTRICAL DRAWINGS ARE GENERALLY DIAGRAMMATIC. THE ELECTRICAL INSTALLATION SHALL BE COORDINATED WITH ALL UTILITIES SO THAT INTERFERENCES BETWEEN THE ELECTRICAL INSTALLATION AND OTHER TRADES WILL BE AVOIDED.
- 2) THE EC SHALL COORDINATE WITH THE LANDSCAPE ARCHITECT AND MAKE ALL ADJUSTMENTS NECESSARY.
- 3) ALL FINAL CONNECTIONS SHOWN ON THE DRAWINGS ARE ACTUAL REQUIREMENTS OF THE EQUIPMENT AND ARE SHOWN IN THEIR APPROXIMATE LOCATION.
- 4) ELECTRICAL SYSTEM AND COMPONENTS SHALL BE IN COMPLIANCE WITH THE REGULATIONS OF THE WITH STATE AND LOCAL ENFORCING AGENCIES.
- 5) EC SHALL VISIT THE SITE AND BRING UP ANY DISCREPANCIES AND ITEMS WHICH ARE NOT SPECIFICALLY CALLED FOR OR SHOWN, BUT ARE REQUIRED FOR A COMPLETE ELECTRICAL SYSTEM, AND WHICH AFFECT HIS CONTRACT PRIOR TO ENTERING AND SIGNING THE CONTRACT. AFTER AWARDDING THE CONTRACT, ALL SUCH ITEMS REQUIRED FOR A COMPLETE SYSTEM READY FOR THE OWNER'S BENEFICIAL USE SHALL BE FURNISHED AND INSTALLED INCLUDING ALL SUCH AFOREMENTIONED DISCREPANCY ITEMS AT NO ADDITIONAL COST TO THE OWNER.
- 6) ALL WORK SHALL CONFORM TO U.L., N.E.C., N.F.P.A., AND ALL OTHER CODES OF JURISDICTION WHICH ARE APPLICABLE TO THIS ELECTRICAL INSTALLATION.
- 7) EC SHALL PURCHASE ALL NECESSARY ELECTRICAL PERMITS AND COORDINATE INSPECTIONS FOR APPROVAL.

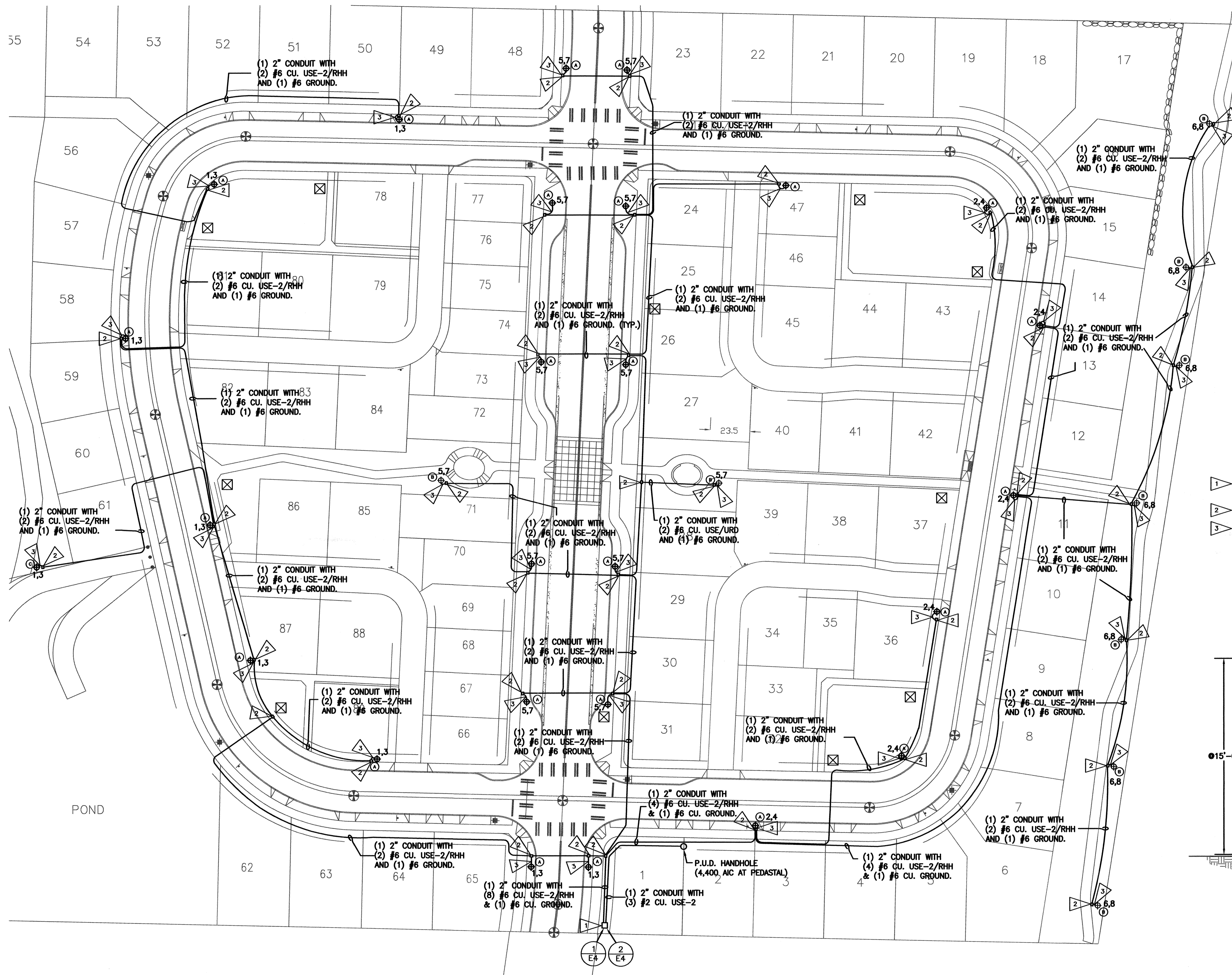
REVISIONS:	PLAN INDEX:
	E1 GENERAL NOTES, LEGEND AND PLAN INDEX
	E2 SITE POWER PLAN
	E3 SITE PHOTOMETRICS
	E4 POWER RISER AND DETAILS
	E5 SPECIFICATIONS

ABBREVIATIONS

AC	AIR CONDITIONING	IG	ISOLATED GROUND
AFF	ABOVE FINISHED FLOOR	J-BOX	JUNCTION BOX
AHJ	AUTHORITY HAVING JURISDICTION	LTG	LIGHTING
AHU	AIR HANDLING UNIT	MTD	MOUNTED
A	AMPERE	M	METER
AWG	AMERICAN WIRE GAUGE	NIC	NOT IN CONTRACT
BLDG	BUILDING	MLO	MAIN LUGS ONLY
BKBD	BACKBOARD	(N)	NEW
BKR	BREAKER	OHL	OVERHEAD LINE
CAB	CABINET	OL	OVERLOAD
C	CONDUIT	PNL	PANEL
CB	CIRCUIT BREAKER	P	POLE
CKT	CIRCUIT	REC	RECEPTACLE
CCTV	CLOSED CIRCUIT TELEVISION	SMR	SURFACE METAL RACEWAY
CO	CONDUIT ONLY	SW	SWITCH
CT	CURRENT TRANSFORMER	SWBD	SWITCHBOARD
DIST	DISTRIBUTION	TEL	TELEPHONE
EC	ELECTRICAL CONTRACTOR	TYP	TYPICAL
(E)	EXISTING	TV	TELEVISION
EF	EXHAUST FAN	UON	UNLESS OTHERWISE NOTED
ENCL	ENCLOSURE	UV	UNIT VENTILATOR
EW	ELECTRIC WATER COOLER	UG	UNDERGROUND
F/A	FIRE ALARM	W	WATT
FBO	FURNISHED BY OWNER	WH	WATT HOUR METER
FOIC	FURNISHED BY OWNER	WP	WEATHERPROOF
F	FUSE	XMFR	TRANSFORMER
GFI	GROUND FAULT INTERRUPTER	V	VOLT
HTR	HEATER	Y	WYE

LIGHTING PLANS

WOODSIDE WALK & MAIN STREET HDEV-2490



POWER PLAN
SCALE: 1"=30'-0"

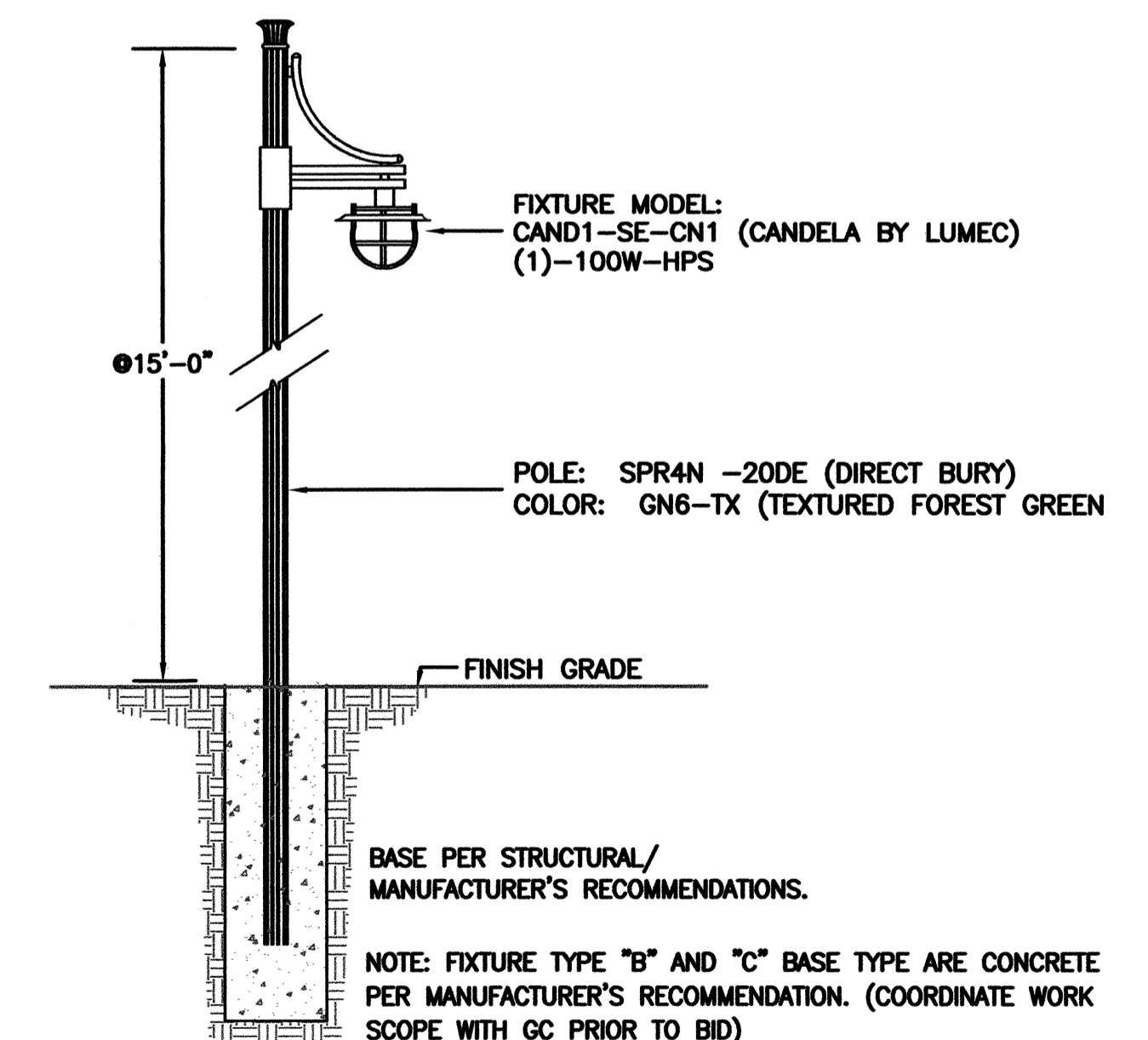
STREET LIGHT FIXTURE SCHEDULE							
MARK	MANUFACTURER, CATALOG NUMBER	BAL/Qty	VOLTS	WATTS	LAMPS	MOUNTING	POLE
A	LUMEC #CAND1SE-CM1	XFMR	240	100	(1) 100 WATT HPS	POLE	SPR4N-20DE, GN8-TX (TEXTURED FOREST GREEN) 20' HIGH
B	LUMEC #CANDS6-SR5	XFMR	240	100	(1) 70 WATT HPS	POLE	APR4F-12HB GN8-TX (TEXTURED DARK FOREST GREEN) 12' HIGH
C	LUMEC #CANDB2-FRN	XFMR	240	50	(1) 50 WATT HPS	POLE	CONCRETE ANCHOR BOLT BASE, GN8-TX (TEXTURED DARK FOREST GREEN)

GENERAL NOTES:

- 1) ALL STREET LIGHT WORK SHALL COMPLY WITH THE CITY OF MILL CREEK STANDARDS & WSDOT STANDARDS. THE EC SHALL PURCHASE AND INSTALL LIGHT FIXTURES PER THE CITY OF MILL CREEK'S PLANS "LGT 076", "LGT 073" AND "LGT 071".
- 2) ELECTRICAL CONTRACTOR SHALL COORDINATE ALL REQUIRED WORK ASSOCIATED WITH P.U.D. AND PAY REQUIRED FEES FOR STREET LIGHTING WORK IF APPLICABLE.
- 3) GROUNDING SHALL BE PER NEC ARTICLE 250.
- 4) ALL CONDUIT SHALL BE BURIED A MINIMUM OF 24".
- 5) THE EC SHALL FIELD VERIFY ALL UTILITY LOCATIONS AND MAKE TRENCH AND CONDUIT ADJUSTMENTS AS NECESSARY TO AVOID CONFLICTS.
- 6) LIGHT POLE FOUNDATION SHALL BE PER STRUCTURAL ENGINEER AND MANUFACTURER'S RECOMMENDATIONS.
- 7) THE EC SHALL ACQUIRE THE CITY OF MILL CREEK STANDARD PLANS STR 062 FOR TRENCHING DETAILS AND COMPLY WITH ALL DISTANCE REQUIREMENTS.
- 8) CONTACT GAYLE DANAHY AT SNOHOMISH COUNTY PUD FOR POWER CONNECTION. PHONE: (425) 783-8507
- 9) THE EC SHALL FIELD ADJUST STREET LIGHTING TO BLEND WITH LANDSCAPE.
- 10) THE EC SHALL BE RESPONSIBLE FOR ALL LIGHT FIXTURE BASE INSTALLATION AND SHALL BE INSTALLED PER MANUFACTURER RECOMMENDATIONS. A BASE DRAWING SHALL BE SUBMITTED TO THE CITY OF MILL CREEK FOR APPROVAL.

FLAG NOTES:

- 1) SKYLINE METER & PANEL CABINET. (ALUMINUM ENCLOSURE) SEE POWER RISER ON SHEET E4. SKYLINE CONTACT PERSON: JON SHELDRAHL (206) 682-4422
- 2) UNDERGROUND J-BOX - METEK #170117.
- 3) (1) 1" CONDUIT WITH (2) #6 CU. USE-2/RHH WIRES AND (1) #6 CU. GROUND.



FIXTURE TYPE "A" (TYP)
NO SCALE

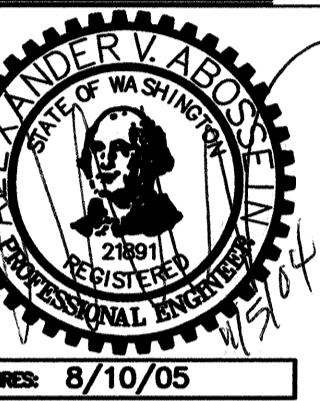
1
E2

**Abossein
Engineering**

MECHANICAL - ELECTRICAL
FIRE PROTECTION - ENERGY

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THE COTTAGES AT
MILL CREEK
MILL CREEK, WA

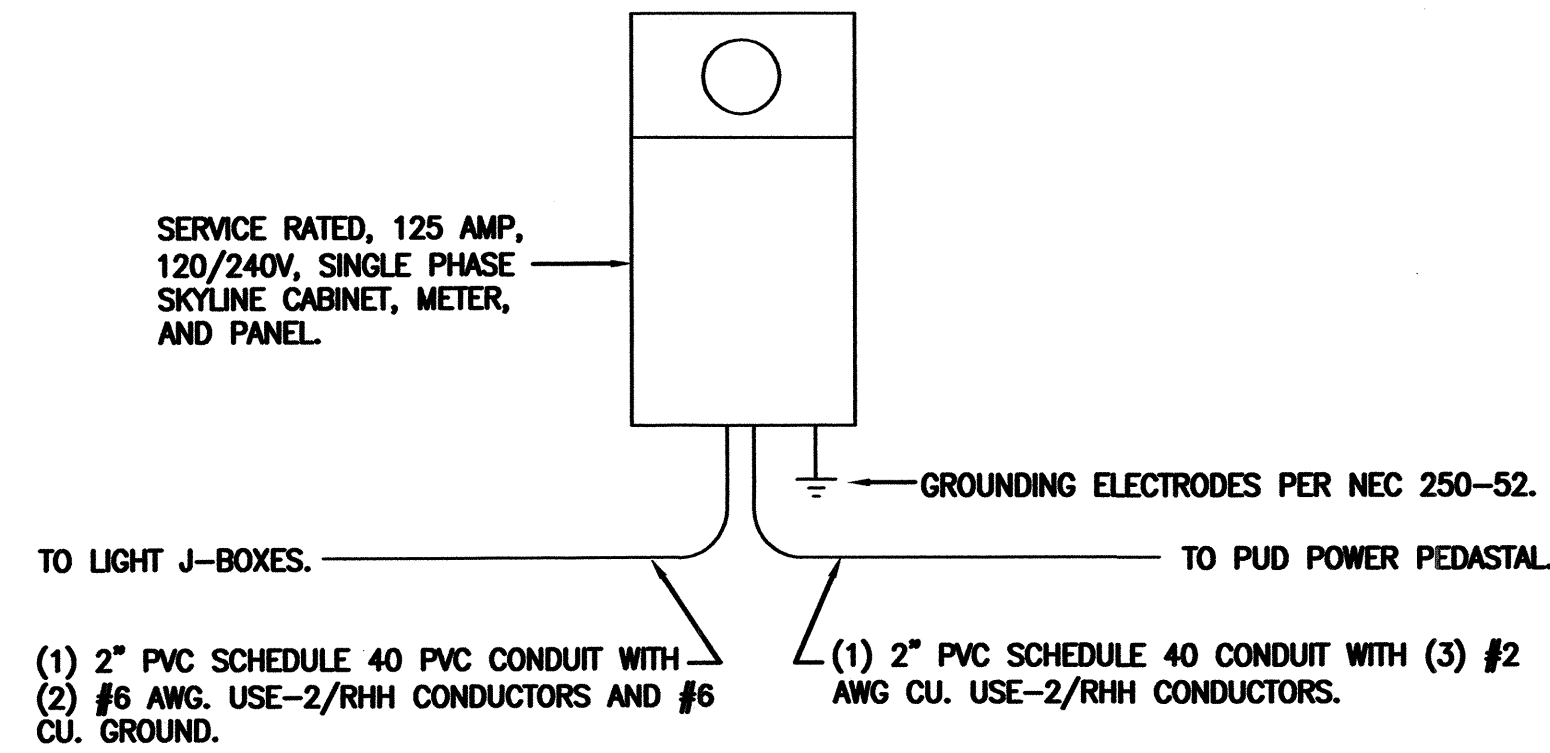
SHEET TITLE:
POWER PLAN

Revisions:
City Comments 11-5-04

Job No.: 24103
Date: 10/27/04

E2
(OF 5)

HDEV-2491



STREET LIGHT VOLTAGE DROP CALCULATION (CIRCUIT #1 WEST LIGHTS)

VD = VOLTAGE DROP
K = CONSTANT FOR COPPER
I = AMPERES
CM = CIRCULAR MILS FOR #6 CU.
L = LENGTH OF CIRCUIT

$$\text{FORMULA: } VD = \frac{K \times L \times I}{CM}$$

STREET LIGHT CIRCUIT

$$VD = \frac{836' \times 22 \times 3.9A}{26,240}$$

$$VD = \frac{71,729}{26,240}$$

$$VD = 2.7 \text{ OR } 1.1\%$$

STREET LIGHT VOLTAGE DROP CALCULATION (CIRCUIT #2 MAIN STREET)

VD = VOLTAGE DROP
K = CONSTANT FOR COPPER
I = AMPERES
CM = CIRCULAR MILS FOR #6 CU.
L = LENGTH OF CIRCUIT

$$\text{FORMULA: } VD = \frac{K \times L \times I}{CM}$$

STREET LIGHT CIRCUIT

$$VD = \frac{920' \times 22 \times 6.1A}{26,240}$$

$$VD = \frac{123,464}{26,240}$$

$$VD = 4.7 \text{ OR } 2\%$$

STREET LIGHT VOLTAGE DROP CALCULATION (CIRCUIT #3 EAST STREET LIGHTS)

VD = VOLTAGE DROP
K = CONSTANT FOR COPPER
I = AMPERES
CM = CIRCULAR MILS FOR #6 CU.
L = LENGTH OF CIRCUIT

$$\text{FORMULA: } VD = \frac{K \times L \times I}{CM}$$

STREET LIGHT CIRCUIT

$$VD = \frac{712' \times 22 \times 2.75A}{26,240}$$

$$VD = \frac{43,076}{26,240}$$

$$VD = 1.6 \text{ OR } .6\%$$

STREET LIGHT VOLTAGE DROP CALCULATION (CIRCUIT #4, PEDESTRIAN LIGHTS)

VD = VOLTAGE DROP
K = CONSTANT FOR COPPER
I = AMPERES
CM = CIRCULAR MILS FOR #6 CU.
L = LENGTH OF CIRCUIT

$$\text{FORMULA: } VD = \frac{K \times L \times I}{CM}$$

STREET LIGHT CIRCUIT

$$VD = \frac{810' \times 22 \times 2.08A}{26,240}$$

$$VD = \frac{37,065}{26,240}$$

$$VD = 1.41 \text{ OR } .59\%$$

NOTE: CALCULATION INCLUDES BALLAST FACTOR.

LOCATION: SEE SITE PLAN													
LOAD DISTRIBUTION						FEEDER: 100 AMP 1 P 3W + GND							
PH	REC	LTG	EDP	HTG	KIT	CKT	DESCRIPTION	PH	AMP	POLE	LOAD KVA		
A		0.47				1	WEST LIGHTS	A	20	2	0.47	AMP:	125
B		0.47				3	—	B	—	—	0.47	VOLTS:	240/120
		0.72				5	MAIN STREET LIGHTS	A	20	2	0.72	PHASE:	1
		0.72				7	—	B	—	—	0.72	WIRES:	3
A	0.18					9	GFCI OUTLET	A	20	1	0.18	BUS TYPE:	CU
B						11		A			0.00	A.I.C.:	10,000
A						13		A			0.00		
B						15		B			0.00		
A												M.L.O.:	
B												MAIN CB:	100
A												FLUSH	
B												SURFACE:	
A												GND. BAR:	
B												ISO GND:	
A												200% NEU:	
B												FEED THRU:	
A												DR. LUG:	
B												TOP FEED:	
A												BTM FEED:	X
A		0.33				2	EAST LIGHTS	A	20	2	0.33	PANEL T.C.I.	
B		0.33				4	—	B	—	—	0.33	LOAD (KVA)	
		0.25				6	SR 527 PEDESTALN LIGHTS	A	20	2	0.25	REC	0.2
B		0.25				8	—	B	—	—	0.25	LTG	3.7
		0.20				10	CONTROL	A	20	1	0.20	EDP	0.0
B						12		A			0.00	HTG	0.0
A						14		B			0.00	KIT	0.0
B						16		A			0.00	TOTAL	3.9
A								B					
B												FEEDER T.C.I.	
A												LOAD (KVA)	
B												REC	0.2
A												LTG	3.7
B												EDP	0.0
A												HTG	0.0
B												KIT	0.0
A												TOTAL	3.9
B													
A												FEEDER DEMAND	
B												KVA	4.9
A												AMPERES	20.2
B													
Manufacturer/Type:							RECEPTACLES (1ST 10KVA):	0.2	KVA	100%	0.2	KVA	
Circuit Breaker Type:							RECEPTACLES OVER 10KVA:	0.0	KVA	50%	0.0	KVA	
Remarks:							LIGHTING:	3.7	KVA	125%	4.7	KVA	
							EQUIPMENT:	0.0	KVA	100%	0.0	KVA	
							HEATING:	0.0	KVA	100%	0.0	KVA	
							KITCHEN:	0.0	KVA	65%	0.0	KVA	
							25% OF LARGEST MOTOR:		KVA	25%	0.0	KVA	
							CONNECTED:	3.9	KVA	DEMAND:	4.8	KVA	
							CONNECTED:	16.3	Amps	DEMAND:	20.2	Amperes	
TOTAL CONNECTED LOAD PER PHASE:													
PHASE A : 2.1 KVA													
PHASE B: 1.8 KVA													

SECTION 16000 - ELECTRICAL SPECIFICATIONS

GENERAL

1. GENERAL CONDITIONS:

- A. The General Conditions, Supplementary Conditions and Special Conditions are a part of this contract and apply to this section as fully as if repeated herein.

2. SCOPE:

- A. This section of specifications includes, but is not limited to:
- B. All labor, tools, appliances, materials and equipment required to furnish and install the complete installation shown on the drawings for this section of the work and/or in the following specifications, including that which is reasonably inferred.

3. CODES AND REGULATIONS:

- A. All work and materials shall be in accordance with applicable requirements of public authorities having jurisdiction and utilities furnishing services.

- B. Codes governing this work include but are not limited to the latest approved edition of the following:

National Fire Protection Association's National Electrical Code (NEC).
Occupational Safety and Health Act (OSHA).
Local Ordinances and Regulations.

4. STANDARDS:

- A. Electrical material and equipment shall have been tested and listed or labeled as conforming to approved published standards by Underwriters Laboratories where such listing or labeling service is available for the class of materials or equipment. Where applicable, listing or labeling shall apply to the complete assembled equipment and not to the components alone.

5. SUBMITTALS:

- A. Three copies of materials list, shop drawings and data sheets shall be submitted to Architect &/or Construction Manager for review. Submittals shall be made and favorable review secured before material and equipment is installed.
- B. Materials list shall include fixtures, switchgear, panels, devices, wireways, disconnects, lamps and all other specified or unspecified standard cataloged materials to be used. The list shall include manufacturer, type and such other descriptive data as may be required to determine the acceptability of each item.
- C. Shop drawings and data sheets for equipment and systems shall be submitted where required in the specification for those items. Include information on each component, wiring diagrams, layouts, dimensions and sufficient other data to establish compliance with the specifications and acceptability of the equipment or system.

6. PERMITS AND DRAWINGS:

- A. Permits and inspections shall be by the Electrical Contractor.

7. AS-BUILT DRAWINGS:

- A. On a set of contract drawings, kept at the site during construction, mark all work that is installed differently from that shown, including any revised circuitry, material or equipment. Upon conclusion of work, deliver to Owner's Rep. Construction Manager a set of signed and dated "as-built" drawings.

8. GUARANTEE:

- A. All work shall be guaranteed for a minimum period of one year from the date of acceptance by the Owner. The guarantee period for certain items shall be longer, as indicated in the specification for those items.
- B. Should any malfunction develop during the guarantee time period due to defective material, faulty workmanship, or non-compliance with plans, specifications, codes or directions of the Owner, Architect, Engineer or Inspector, the Contractor shall furnish all necessary labor and materials to correct the malfunction with-out additional charges.

PRODUCTS

1. PANELBOARDS:

- A. Panelboards shall be factory assembled circuit breaker type. The number of poles, type, voltage and ampere ratings shall be as indicated on the drawings. Bussing shall be aluminum or copper (see panel schedules).
- B. Neutral wires shall be connected to a common neutral bus with binding screws or lugs. The neutral bus shall be insulated from the cabinet. Ground wires shall be connected to a common equipment ground bus with binding screws or lugs. The ground bus shall be bonded to the cabinet.
- C. Cabinets shall be flush mounted. Cabinets shall be constructed of galvanized steel conforming to UL and NEC standards. (SEE SHEET E2 FOR SKYLINE PANEL REQUIREMENTS)
- D. Fronts of cabinets shall be not less than 12 gauge steel fastened with screws in countersunk washers, or with approved concealed spring clamps. Cabinet fronts shall have hinged lockable doors with milled keys (all panels shall be keyed alike) and circuit schedule holders with clear plastic windows. Provide typewritten schedules in holders and submit copies for record purposes. Doors shall be fastened to trim with full length flush hinges. Panel fronts shall be shop painted with 2 coats of primer and a finish coat of gray enamel.
- E. Special panelboard construction or features shall be as shown on drawings. For circuit breakers, contactors and other equipment to be included as an assembled part of the panelboard, refer to the paragraph where those items are specified.
- F. All conductor terminals and equipment enclosures shall be U.L. listed for use with minimum 75° C. rated conductors.
- G. Panelboard directory for each panel shall be neatly typed indicating actual load for each branch circuit.
- H. Provide signage for all panelboards & switchboards warning qualified persons of potential flash hazard as required in N.E.C. 110

2. CIRCUIT BREAKERS:

- A. Circuit breakers shall be by the same manufacturer that furnishes the main service equipment and panelboards.
- B. Breakers shall be molded case bolt-on type. Clamp-on, push-on, or plug-in types are not acceptable. Removable handle ties and dual, quad or tandem breakers are not acceptable. Mounting hardware, accessories, faceplates and enclosures shall be provided as necessary for the intended use.
- C. Short circuit interrupting capacity shall be as indicated on the plans and shall in no case be less than 10,000 rms symmetrical amps at the applied voltage.

3. UNDER GROUND JUNCTION BOXES:

- A. The size of each outlet or junction box shall be determined by the number and sizes of wires and conduits entering the box, per NEC, but shall be not less than 18 1/2" X 13" inches deep unless otherwise noted.
- B. The EC shall be responsible to field orient the U.G J-boxes and purchase and install larger boxes as necessary to comply with NEC 314.28.
- C. U.G. junction boxes shall be type METEK #171017

4. CONDUITS AND FITTINGS:

- A. All above ground conduit shall be rigid galvanized steel and shall extend a minimum of 18" below grade. Standard weight rigid metal conduit shall be hot dipped galvanized.
- B. All underground conduit shall be rigid non-metallic PVC schedule 40.
- C. Rigid non-metallic conduit shall be PVC Schedule 40, U.L. approved. All couplings, fittings, solvent cement, etc..
- Where used in damp or wet locations flexible conduit shall be of the liquid-tight type with outer neoprene jacket and suitable liquid-tight fittings.

5. WIRE AND CABLE:

- A. Wire and cable for use on systems of 600 volts or less shall be 600 volt rated type USE-2 or RHH..
- B. All conductors shall be copper.

6. LIGHTING FIXTURES AND LAMPS:

- A. Fixtures shall be complete with all required accessories and equipment, including lamps, necessary for a complete installation. Contractor shall receive, unpack, assemble and install fixtures indicated as indicated on sheet E2.
- B. Submit shop drawings on all fixtures as required under Submittals. Shop Drawings may be catalog data sheets if complete information including mounting hardware is shown and identified. Shop drawings shall include mounting details.

EXECUTION

1. INSTALLATION AND CONNECTION OF ELECTRICAL EQUIPMENT:

- A. Equipment furnished by others shall be completely connected to the electrical system except as noted on the drawings. All fuses, breakers and disconnects shall be provided as necessary for proper protection. Provide all flexible conduit, boxes, fittings, receptacles, cords, plugs and other material required for proper installation. Refer to manufacturer's directions where applicable.
2. INSTALLATION OF CONDUIT:
- A. Standard weight rigid metal conduit shall be used where exposed to the weather, placed underground below concrete slab, and in concrete or masonry construction in contact with earth.
- B. Rigid non-metallic conduit may be used for all underslab or underground work in place of standard weight rigid metal and where specifically specified. All runs of rigid non-metallic conduit shall contain a separate green ground wire adequately sized for service intended. Where required to continue above slab, stub non-metallic conduit 6" above slab then make proper transition to metal conduit.
- C. All rigid steel conduit installed in the ground shall be wrapped with Hunt's Process No. 3, PVC coated or encased in 3" concrete on all sides.
- D. The minimum sizes of conduit shall be code size for the number and size of conductors, unless a larger size is shown, in which case such larger size shall be used.

3. GROUNDING:

- A. Make good mechanical and electrical contact at all poles, panelboards, switchboards, outlet boxes, junction boxes, and wherever the conduit run is connected. Permanently and effectively ground all conduit, fixtures, motors and other equipment as required by all applicable codes, regulations and standards. NEC 250

4. CLEANING AND PROTECTION OF PRODUCTS AND PREMISES:

- A. At frequent intervals during the time of construction, the Contractor shall clean up after his work and remove his debris from the premises, leaving the building and grounds clean to the Owner's satisfaction.
- B. The Contractor shall take all necessary precautions to protect all materials, equipment and property, whether electrical or not, from damage as a result of his work.

5. CHECKING AND TESTING OF EQUIPMENT AND SYSTEMS:

- A. Panels, disconnects, starters and other equipment installed under this section shall be inspected for defects and tested for proper operation.
- B. Systems shall be tested for short circuits, open circuits and wrong connections and shall be free from mechanical and electrical defects. Circuits shall be tested for proper neutral and ground connections.

6. NAMEPLATES AND LABELS:

- A. Nameplates shall be provided for circuit breakers in the main switchboard, switches, and to identify each panelboard and similar items which are furnished or installed under this section.
- B. Nameplates shall be engraved laminated plastic with characters cut through the black top layer to white layer below.

7. INSTALLATION AND CONNECTION OF WIRING:

- A. All wiring shall be installed in conduit, wireways, or gutters, except where other raceway systems or methods are specifically shown.
- B. Clean out and dry all conduit and wireways before pulling any wires. Use no lubricant except as recommended by the wire or cable manufacturer.
- C. Make all connections and splices necessary to properly complete the electrical wiring. Connections and splices shall be made only in pull, junction or outlet boxes, or in switchboards, wireways or panels having sufficient code sized gutter space. Connections and splices in wires smaller than No. 6 AWG shall be made with spring type connectors, and in wires No. 6 AWG and larger shall be made with compression, vise type, or split bolt solderless connectors, insulated and taped. The EC shall use crimp spade connectors to adapt #6 wiring to breakers.

8. SUBSTITUTIONS:

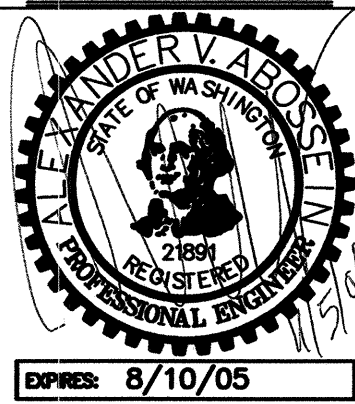
- A. None

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FIRE PROTECTION - ENERGY

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THE COTTAGES AT
MILL CREEK
MILL CREEK, WA

SHEET TITLE:
SPECIFICATIONS

Revisions:
City Comments 11-5-04

Job No.: 24103
Date: 10/27/04

E5
(OF 5)

HDEV-2493