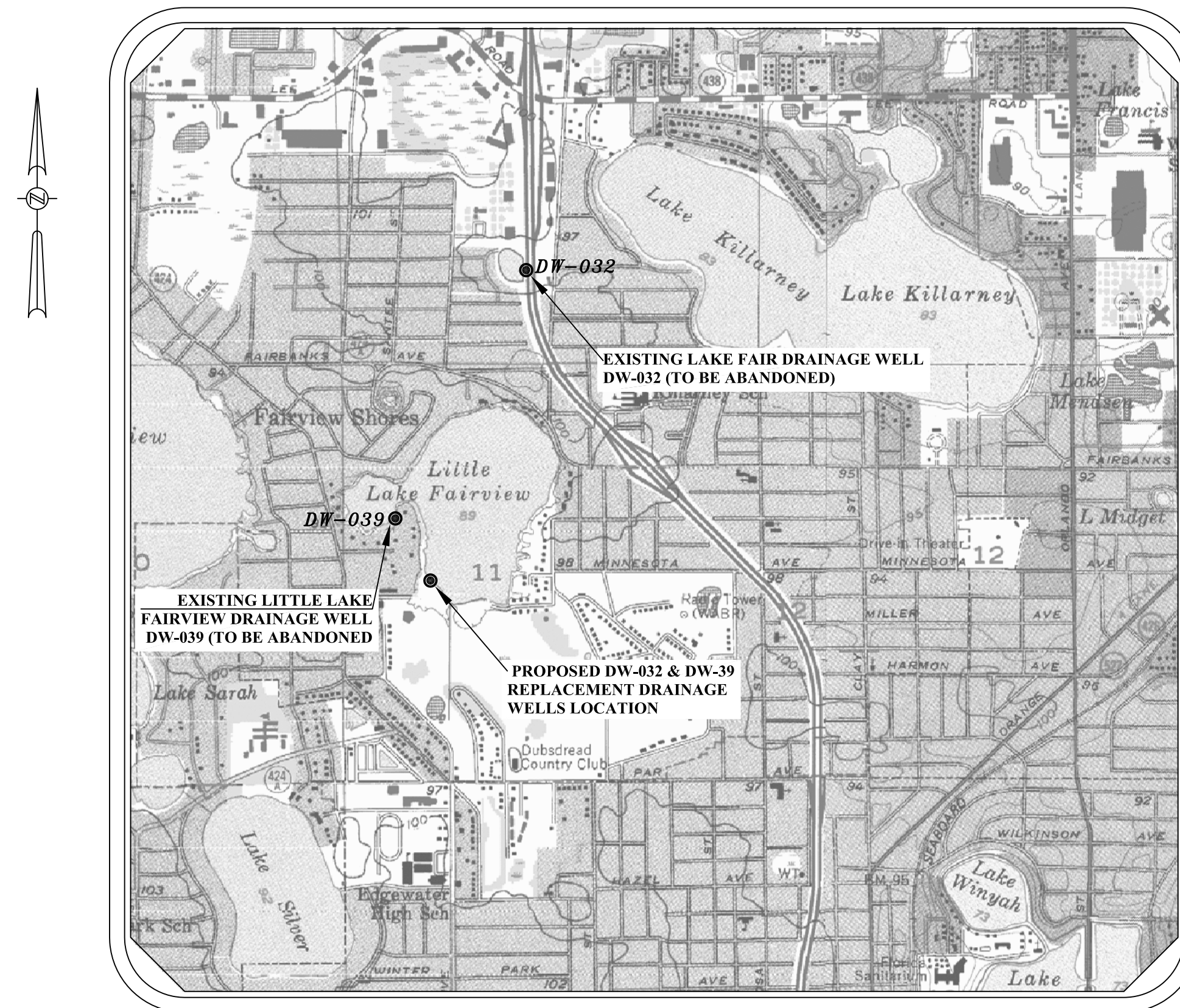




TECHNICAL PLANS AND SPECIFICATIONS
 FOR LITTLE LAKE FAIRVIEW (DW-039)
 AND LAKE FAIR (DW-032)
 DRAINAGE WELL REPLACEMENT

SITE VICINITY MAP



NOT TO SCALE

PLAN INDEX

1. COVER SHEET
2. TOPOGRAPHIC SURVEY - EXISTING DRAINWELL DW-039 SITE
3. TOPOGRAPHIC SURVEY - EXISTING DRAINWELL DW-032 SITE
4. SUMMARY OF QUANTITIES
5. NOTES & SPECIFICATIONS
6. PROPOSED DRAINAGE WELLS SITE LOCATION PLAN FOR DW-039 & DW-032
7. DRAINAGE WELL DEMOLITION & ABANDONMENT PLANS FOR DW-039 & DW-032
8. SITE DEMOLITION PLAN
9. PROPOSED DRAINAGE WELLS REPLACEMENT PLAN FOR DW-039 & DW-032
10. MISCELLANEOUS SITE DETAILS
11. DRAINAGE WELL DETAILS
12. SECTION & DETAILS

MAYOR
 TERESA JACOBS

BOARD OF COUNTY COMMISSIONERS
 S. SCOTT BOYD
 FRED BRUMMER
 PETE CLARKE
 JENNIFER THOMPSON
 TED EDWARDS
 TIFFANY MOORE RUSSELL

DISTRICT 1
 DISTRICT 2
 DISTRICT 3
 DISTRICT 4
 DISTRICT 5
 DISTRICT 6

FEBRUARY 2014

100% SUBMITTAL
 FOR CONSTRUCTION



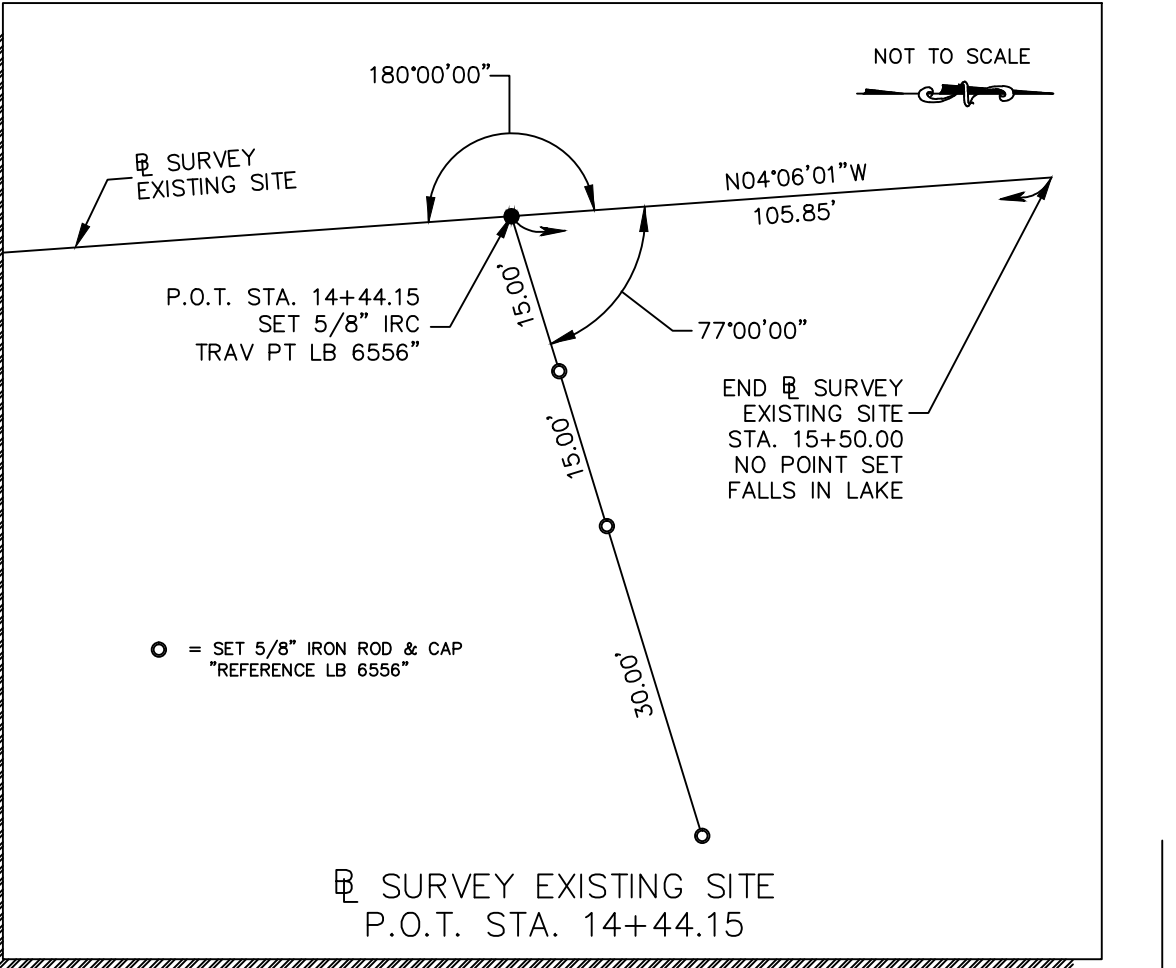
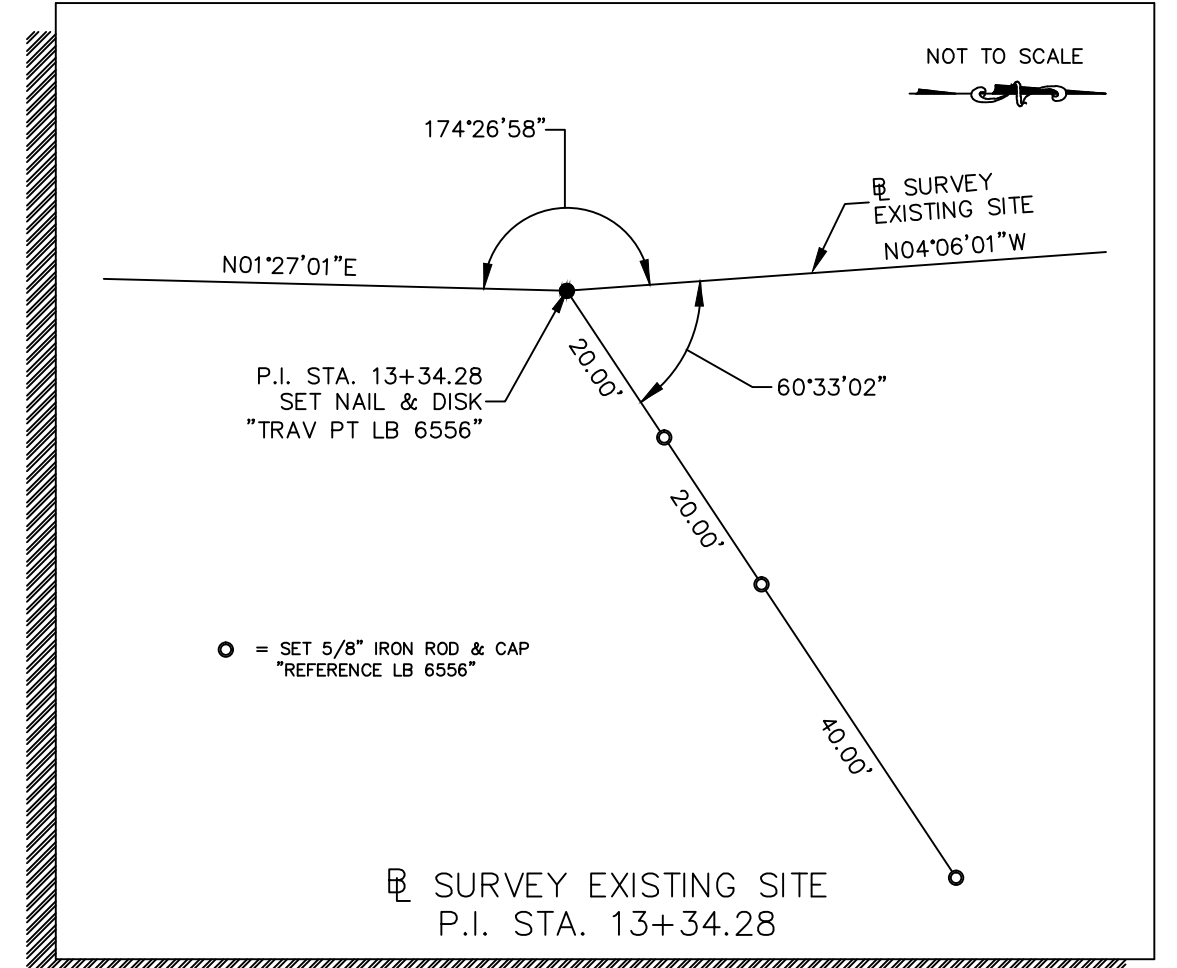
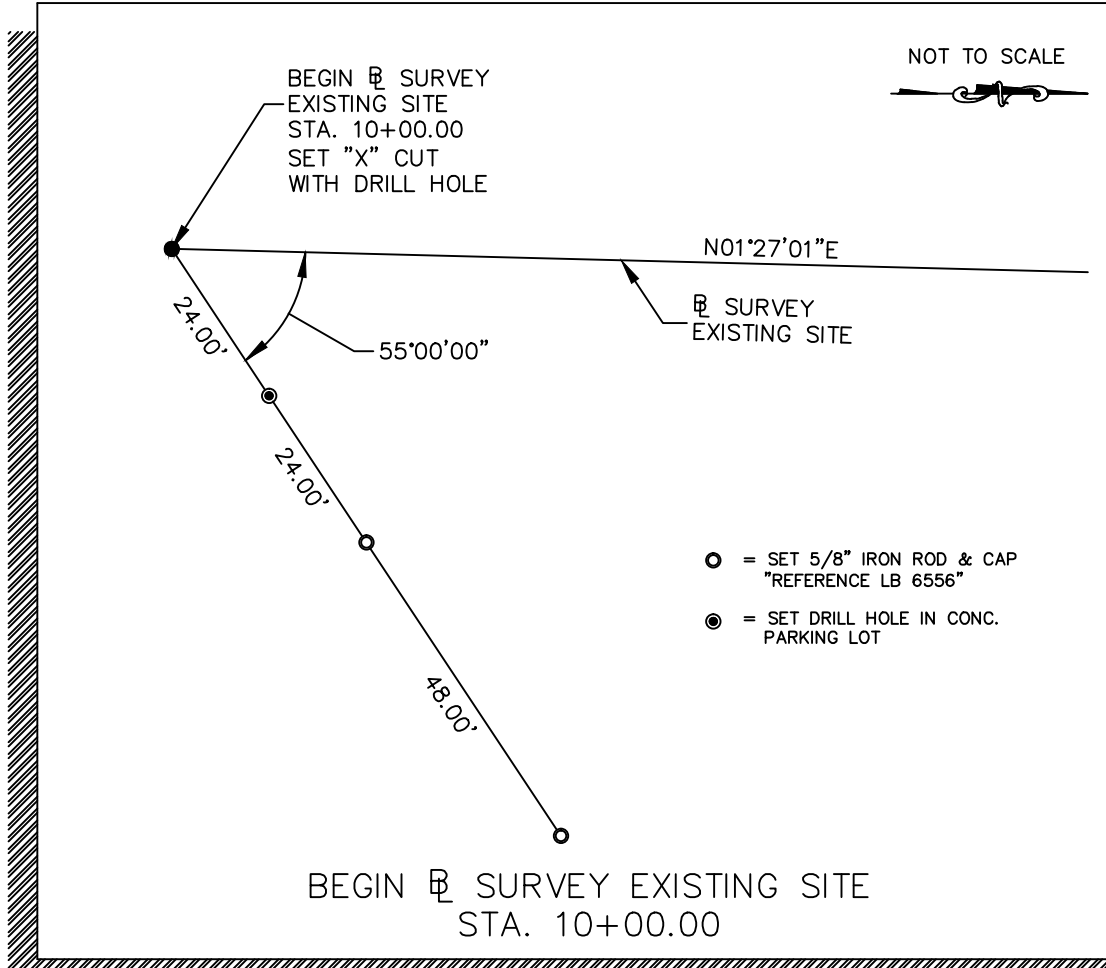
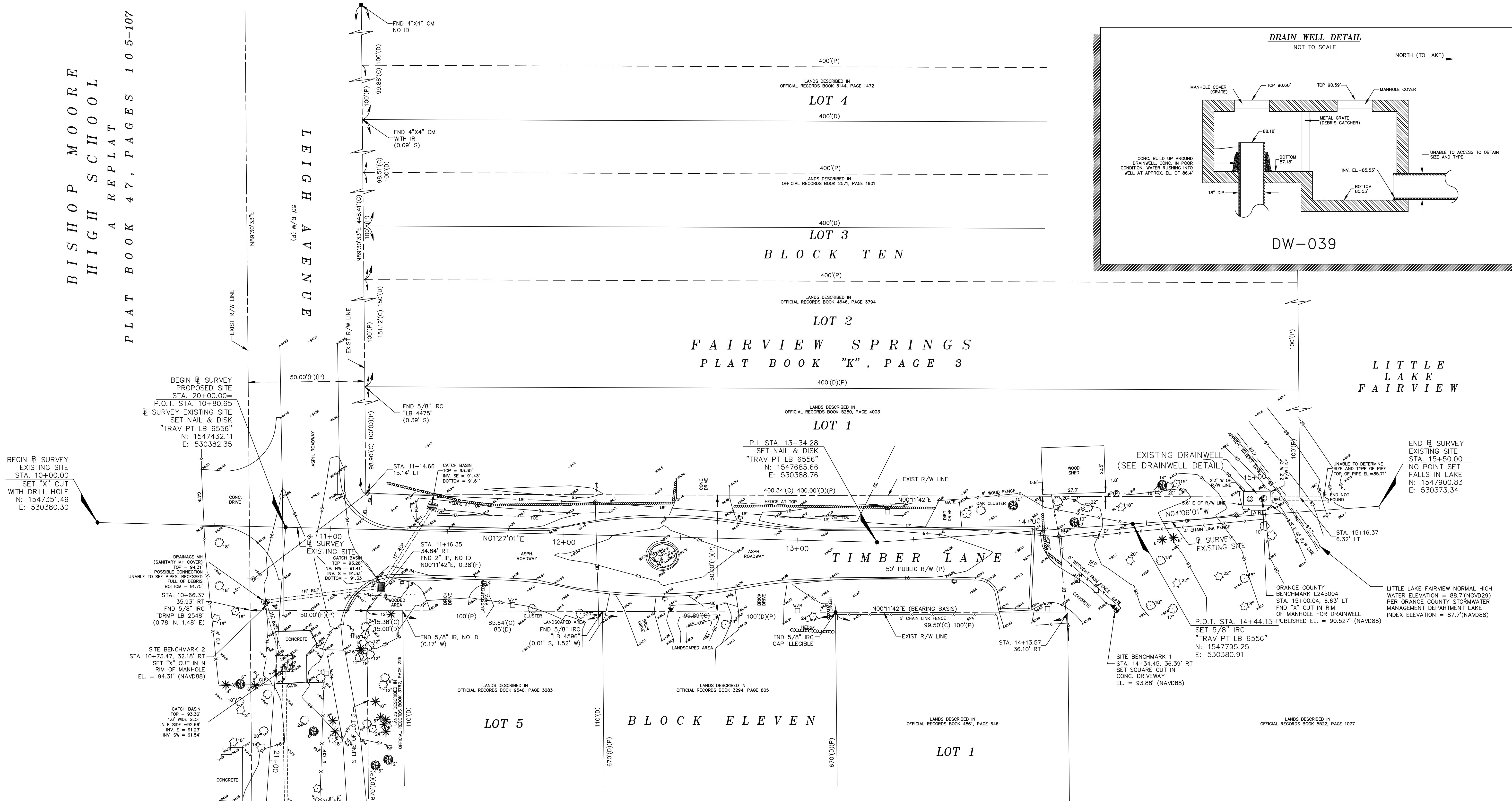
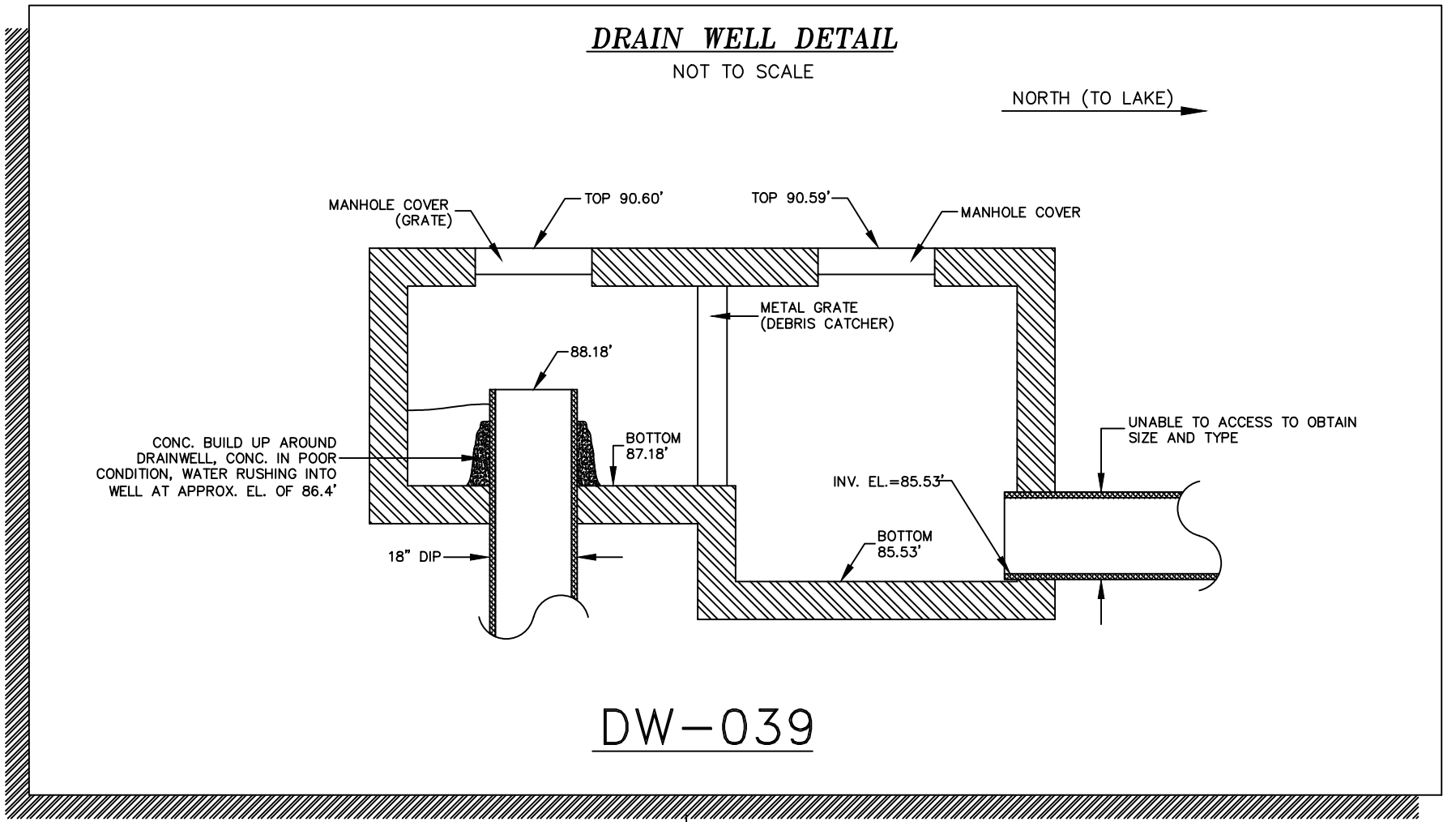
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HIGH SCHOOL
A REPLAT
PLAT BOOK 47, PAGES 105-107

LEIGH AVENUE

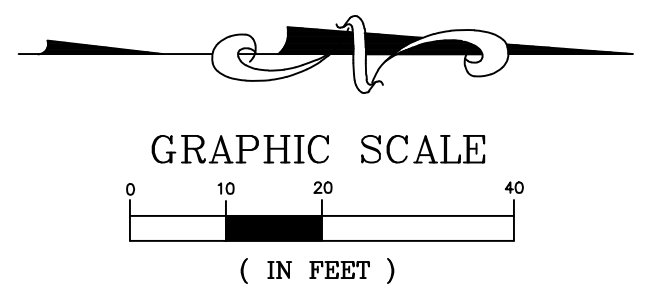
FAIRVIEW SPRINGS
PLAT BOOK "K", PAGE 3

TIMBER LANE

LITTLE LAKE
FAIRVIEW



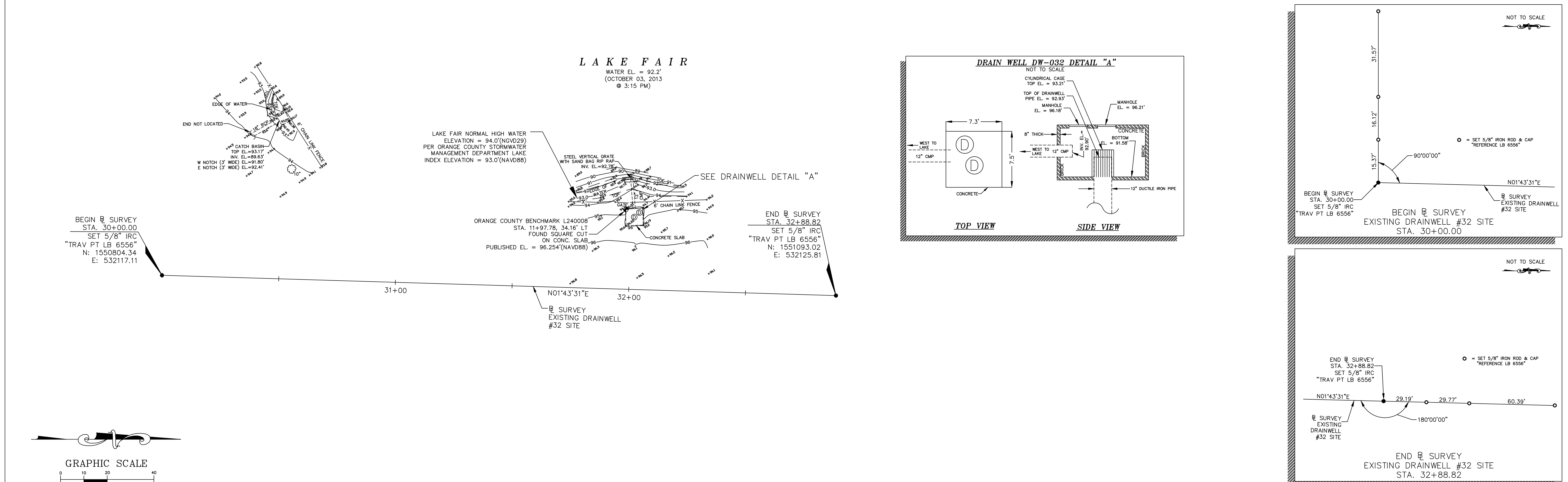
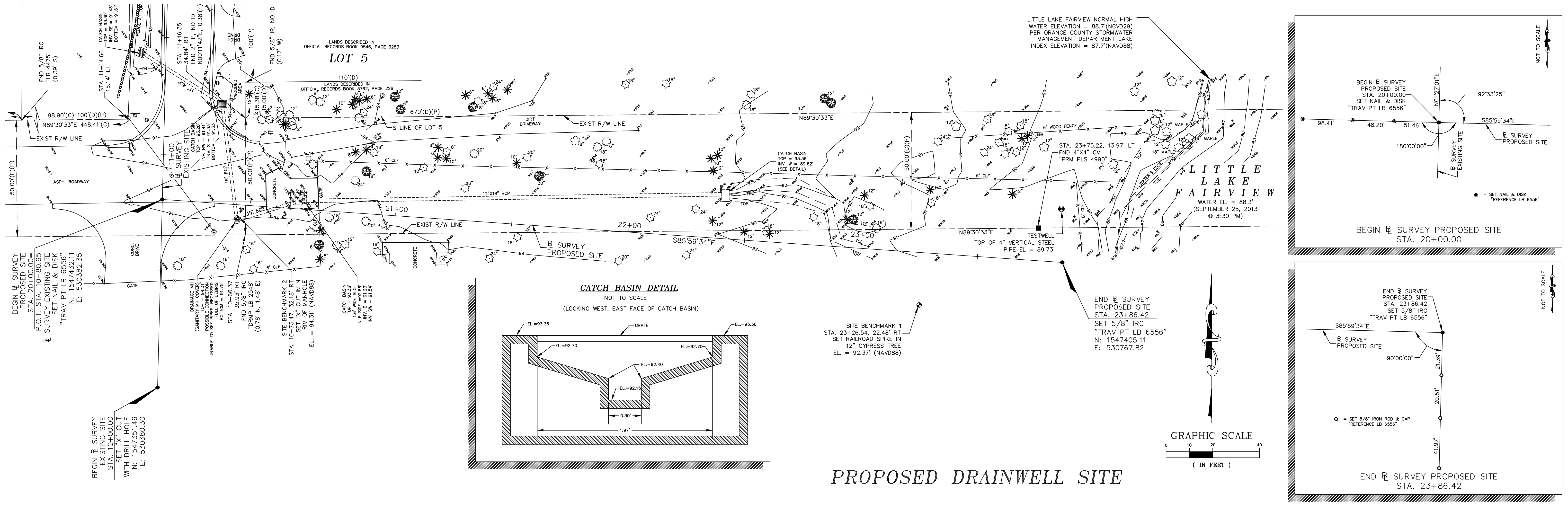
RECREATION
PARK (P)



SEE SHEET 1 FOR LEGEND & ABBREVIATIONS, GENERAL NOTES & CERTIFICATION

EXISTING DRAINWELL DW-039 SITE

<p>GEODATA CONSULTANTS, INC. SURVEYING & MAPPING 2700 WESTHALL LANE SUITE 137 MAITLAND, FLORIDA 32751 VOICE: (407) 660-2322 FAX: 660-8223</p>	DATE: OCT. 08, 2013	SCALE: 1" = 20'
	PROJECT No. 103-52	SHEET OF 12
	100% SUBMITTAL - FOR CONSTRUCTION	



SEE SHEET 1 FOR LEGEND & ABBREVIATIONS, GENERAL NOTES & CERTIFICATION

EXISTING DRAINWELL DW-032 SITE

<p>GEODATA CONSULTANTS, INC. SURVEYING & MAPPING 2700 WESTHALL LANE SUITE 137 MAITLAND, FLORIDA 32751 VOICE: (407) 860-2322 FAX: 860-8223</p>	DATE:	SCALE:
	OCT. 08, 2013	1" = 20'
	PROJECT No. 103-52	SHEET 3 OF 12

100% SUBMITTAL - FOR CONSTRUCTION

"Bid Summary of Quantities" Little Lake Fairview (DW-039) and Fair (DW-032) Drainage Wells Replacement

Item No.	O.C. TP or Spec #	Item Description	Estimated Quantity	Unit
General				
(DW-039 & DW-032) -1	101-1	Mobilization (Not to exceed 5% of the total for items (DW-039 & DW-032) -2 thru (DW-039 & DW-032) -37)	1	LS
(DW-039 & DW-032) -2	101-2	Utility notification, protection of utilities, site maintenance and benchmark survey verification	1	LS
(DW-039 & DW-032) -3	7-1	Record Drawing Preparation 7 Sets ("As-Builts")	1	LS
(DW-039 & DW-032) -4	7-2	Site elevation survey to verify design elevations	1	LS
(DW-039 & DW-032) -5	7-3	Permits	1	LS
(DW-039 & DW-032) -6	7-4	Indemnification	1	LS
(DW-039 & DW-032) -7	102-1	Maintenance of Traffic (signage)	1	LS
Site Preparation				
(DW-039 & DW-032) -8	104-1	Staked Silt Fence Type III (Per Details in Plans)	465	LF
(DW-039 & DW-032) -9	104-2	Floating Turbidity Barrier (Per Details in Plans)	195	LF
(DW-039 & DW-032) -10	104-A1	Dewatering / Flow Diversion	1	LS
(DW-039 & DW-032) -11	120-1	Fill (including additional trench backfill) and re-grade Work Area	50	CY
(DW-039 & DW-032) -12	425-1	Furnish and Install Well Head Structures (Modified FDOT Type J Inlet - Index 200) with all attachments	1	EA
(DW-039 & DW-032) -13	425-2	Furnish and Install Well Head Structures (Modified FDOT Type D Inlet - Index 232) with all attachments	2	EA
(DW-039 & DW-032) -14	425-3	Furnish and Install Inflow Structure (Modified FDOT Headwall Index 250) with all attachments	1	EA
(DW-039 & DW-032) -15	430-1	Furnish and Install Inlet Pipe (Class III 24" x 38" E.R.C.P.)	40	LF
(DW-039 & DW-032) -16	430-2	Furnish and Install Inlet Pipe (Class III 18" diameter R.C.P)	48	LF
(DW-039 & DW-032) -17	X-1	Furnish and Install Aluminum Sheet Pile Wall With Caps and Accessories	640	SF
(DW-039 & DW-032) -18	530-1	Furnish and Install Rip-Rap Material Inclusive of Excavation, Bedding Stones and Geotextile fabric.	8	SY
(DW-039 & DW-032) -19	550-1	Remove 6' Wooden Fence and Replace Upon Completion	80	LF
(DW-039 & DW-032) -20	550-2	Remove 6' Chain Link Fence and Replace Upon Completion	150	LF
(DW-039 & DW-032) -21	570-1	Sodding Non-Pinned (match existing)	430	SY
(DW-039 & DW-032) -22	570-2	Sodding Pinned (match existing)	50	SY
Construction of Replacement Drainage Wells				
(DW-039 & DW-032) -23	COD-1	Furnish and install by driving, 18-inch diameter steel surface casing to 130 ft depth for DW-039A	130	LF
(DW-039 & DW-032) -24	COD-2	Furnish, install and cement 12-inch diameter steel casing to 170 ft. depth for DW-039A using rotary drilling method (18-inch diameter borehole)	170	LF
(DW-039 & DW-032) -25	COD-3	Drill nominal 12-inch diameter open borehole from 170 ft depth to 410 ft. depth for DW-039A	240	LF
(DW-039 & DW-032) -26	COD-4	Furnish and install by driving, 18-inch diameter steel surface casing to 130 ft depth for DW-039B	130	LF
(DW-039 & DW-032) -27	COD-5	Furnish, install and cement 12-inch diameter steel casing to 170 ft. depth for DW-039B using rotary drilling method (18-inch diameter borehole)	170	LF
(DW-039 & DW-032) -28	COD-6	Drill nominal 12-inch diameter open borehole from 170 ft depth to 410 ft. depth for DW-039B	240	LF
(DW-039 & DW-032) -29	COD-7	Furnish and install by driving, 18-inch diameter steel surface casing to 130 ft depth for DW-032	130	LF
(DW-039 & DW-032) -30	COD-8	Furnish, install and cement 12-inch diameter steel casing to 170 ft. depth for DW-032 using rotary drilling method (18-inch diameter borehole)	170	LF
(DW-039 & DW-032) -31	COD-9	Drill nominal 12-inch diameter open borehole from 170 ft depth to 410 ft. depth for DW-032	240	LF
(DW-039 & DW-032) -32	COD-10	Furnish, install and operate well development pumping and piping, equipment, complete	1	LS
(DW-039 & DW-032) -33	COD-11	Conduct geophysical and video loggings (includes: caliper, resistivity, gamma, spontaneous potential & video)	1	LS
(DW-039 & DW-032) -34	COD-12	Furnish and setup pump, piping and equipment to perform recharge tests on new replacement wells	1	LS
(DW-039 & DW-032) -35	COD-13	Conduct recharge tests [three (3) 2-hour tests]	1	LS
Abandonment Of Existing Drainage Well				
(DW-039 & DW-032) -36	AED-1	Abandon existing 18-inch diameter drainage well, including demolition and disposal of inflow pipe and structure for DW-039	1	LS
(DW-039 & DW-032) -37	AED-2	Abandon existing 12-inch diameter drainage well, including demolition and disposal of inflow pipe and structure for DW-032	1	LS
NOTES:				
AED-*, COD-*, X-* Refer to Engineer's Additional Specifications.				

NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK				
	DATE	REVISIONS	BY	CHECKED

LITTLE LAKE FAIRVIEW DW-039
AND LAKE FAIR DW-032
DRAINAGE WELL REPLACEMENT
ORANGE COUNTY, FLORIDA



SUMMARY OF QUANTITIES

DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
SJS	VP	SJS/DS	DS

PROJECT NO.	13-092
SCALE	N/A
DATE	FEBRUARY 2014
SHEET NO.	4
	4 OF 12

DEVO SEERREERAM, Ph.D., P.E.
REGISTRATION NO. 48303

GENERAL NOTES:

- THESE GENERAL NOTES APPLY TO ALL WORK IN THIS SET OF DRAWINGS.
- IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR(S) TO ENSURE THAT ALL REQUIRED PERMITS ARE OBTAINED AND ARE IN HAND AT THE JOB SITE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. CONTRACTOR SHALL ABIDE BY ALL CONDITIONS CONTAINED THEREIN.
- THE SPECIFICATIONS, NOTES AND PLANS CALL ATTENTION TO CERTAIN REQUIRED FEATURES OF THE CONSTRUCTION BUT DO NOT PURPORT TO COVER ALL DETAILS OF DESIGN AND CONSTRUCTION. HOWEVER, THE CONTRACTOR SHALL FURNISH AND INSTALL THE WORK IN ALL DETAILS AND READY FOR OPERATION.
- ALL EQUIPMENT SHALL BE HANDLED, STORED, INSTALLED, TESTED AND OPERATED IN STRICT ACCORDANCE WITH THE APPLICABLE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- ALL WORK SHALL BE ACCOMPLISHED TO THE HIGHEST QUALITY CRAFTSMANSHIP STANDARDS AS APPROVED BY THE PROJECT ENGINEER.
- ALL WORK SHALL BE ACCOMPLISHED IN STRICT ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES, ORDINANCES AND REGULATIONS.
- APPARENT ERRORS, DISCREPANCIES OR OMISSIONS ON THE DRAWINGS SHALL BE BROUGHT TO THE PROJECT ENGINEER'S ATTENTION BEFORE BIDDING.
- AFTER COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL PERFORM SITE CLEAN-UP OPERATION FOR REMOVAL OF ALL TRASH, DEBRIS, EXCESS MATERIAL AND EQUIPMENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PRESENT THE PROJECT SITE CLEAN AND IN GOOD ORDER AT THE TIME OF FINAL ACCEPTANCE.
- THE CONTRACTOR SHALL COMPLY WITH ALL RULES, REGULATIONS, AND SPECIFICATIONS OF ORANGE COUNTY AND THE FLORIDA DEPARTMENT OF TRANSPORTATION FOR SITE IMPROVEMENT IN THE ABSENCE OF A PARTICULAR REQUIREMENT.
- FLORIDA LAW (F.S. 553.851) PROTECTION OF UNDERGROUND PIPELINES MANDATES THAT "NO EXCAVATOR SHALL COMMENCE OR PERFORM ANY EXCAVATION IN ANY PUBLIC OR PRIVATE STREET, ALLEY, RIGHT-OF-WAY DEDICATED TO THE PUBLIC USE, OR GAS UTILITY EASEMENT WITHOUT FIRST OBTAINING INFORMATION CONCERNING THE POSSIBLE LOCATION OF GAS PIPELINES IN THE AREA OF THE PROPOSED EXCAVATION." THIS INCLUDES ANY OPERATION UTILIZING HAND TOOLS OR POWER TOOLS WHICH MOVES OR REMOVES ANY STRUCTURE, EARTH, ROCK, OR OTHER MASS OF MATERIAL BY SUCH METHODS AS DIGGING, BACK FILLING, DEMOLITION, GRADING, DITCHING, DRILLING, BORING AND CABLE PLOWING. THE EXCAVATOR MUST NOTIFY THE GAS UTILITY A MINIMUM OF 48 HOURS AND A MAXIMUM OF 5 DAYS PRIOR TO EXCAVATING (EXCLUDING SATURDAYS, SUNDAYS, AND LEGAL HOLIDAYS).
- CONTRACTOR SHALL NOTIFY ALL APPROPRIATE UTILITY COMPANIES OF PROPOSED START OF WORK IN ACCORDANCE WITH THEIR STANDARD REQUIREMENTS; INCLUDING BUT NOT LIMITED TO WATER, SEWER, POWER, TELEPHONE, GAS, AND CABLE TV COMPANIES.
- ANY DIFFERING SITE CONDITIONS FROM THOSE WHICH ARE REPRESENTED HEREON, WHETHER ABOVE, ON OR BELOW THE SURFACE OF THE GROUND, SHOULD BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER AND OWNER IN WRITING. NO CLAIM FOR EXPENSES INCURRED BY THE CONTRACTOR DUE TO DIFFERING SITE CONDITIONS WILL BE ALLOWED IF CONTRACTOR FAILS TO PROVIDE THE REQUIRED WRITTEN NOTIFICATION OF SUCH CONDITIONS FOR REVIEW BY THE PROJECT ENGINEER AND OWNER.
- THE CONTRACTOR SHALL FURNISH OWNER WITH ACCURATE RECORD DRAWINGS SHOWING AS-CONSTRUCTED HORIZONTAL AND VERTICAL DIMENSIONING OF THE WORK. THE SUBMITTAL COPY OF THE RECORD DRAWINGS WILL NOT BE RETURNED. THE RECORD DRAWING OR A REPRODUCIBLE COPY PREPARED BY THE ENGINEER SHALL BE CERTIFIED BY THE CONTRACTOR AS CORRECT. ALL INFORMATION WHICH IS UNCHANGED AND CURRENT SHALL BE NOTED BY CHECKING OFF OR CIRCLING. ALL REVISED INFORMATION SHALL BE CROSSED THROUGH AND NEW DATA ADDED.
- ALL PRIVATE AND PUBLIC PROPERTIES AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN EXISTED UNLESS SPECIFICALLY EXEMPTED BY THE PLANS. THE COST FOR SUCH RESTORATION SHALL BE INCIDENTAL TO OTHER CONSTRUCTION AND NO EXTRA COMPENSATION WILL BE ALLOWED.
- IN THE EVENT THERE IS A CONFLICT BETWEEN THE PLANS AND ORANGE COUNTY TECHNICAL PROVISIONS, THE ORANGE COUNTY TECHNICAL PROVISIONS SHALL SUPERSEDE, UNLESS OTHERWISE DETERMINED BY THE ENGINEER.

GEOMETRY & SURVEY NOTES:

- THE PROPOSED DRAINAGE WELL DESIGN PLANS ARE BASED ON A SURVEY PREPARED FOR THE OWNER BY GEODATA CONSULTANTS, INC. SURVEYING & MAPPING DATED 10/08/2013.
- REFER TO THE SURVEY SHEETS AND SURVEYOR'S NOTES FOR REFERENCED BENCHMARKS.
- CONTRACTOR SHALL STAKE ALL IMPROVEMENTS USING THE GEOMETRIC DATA PROVIDED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO COMPLETELY STAKE AND CHECK ALL IMPROVEMENTS TO ENSURE ADEQUATE POSITIONING, BOTH HORIZONTAL AND VERTICAL, PRIOR TO THE INSTALLATION OF ANY IMPROVEMENTS. THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IF ANY APPARENT DISCREPANCIES ARE FOUND.
- ALL (P.R.M.'s) IRONS AND MONUMENTS SHOWN ON PLANS, OR FOUND, SHALL BE PRESERVED.
- PUBLIC LAND CORNERS WITHIN THE LIMITS OF CONSTRUCTION SHALL BE PROTECTED IF A CORNER MONUMENT IS IN DANGER OF BEING DESTROYED OR DISTURBED, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND THE COUNTY SURVEYOR, WITHOUT DELAY, BY TELEPHONE. THE CONTRACTOR SHALL PROVIDE WRITTEN FOLLOW-UP CONFIRMATION WITHIN 48 HOURS OF TELEPHONE NOTIFICATION.

EROSION CONTROL NOTES:

- THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL CODES, ORDINANCES, AND REGULATIONS GOVERNING POLLUTION OF THE ENVIRONMENT AND SHALL IMPLEMENT ALL MEASURES NEEDED TO ENSURE ADEQUATE EROSION AND SEDIMENT CONTROL DURING THE ENTIRE DURATION OF CONSTRUCTION. EROSION AND SEDIMENT CONTROL MEASURES SHALL CONFORM TO ORANGE COUNTY, ST. JOHNS RIVER WATER MANAGEMENT DISTRICT, FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, AND FLORIDA DEPARTMENT OF TRANSPORTATION REQUIREMENTS. INSTALLATION OF SILT FENCES AND TURBIDITY BARRIERS SHALL BE IN ACCORDANCE WITH F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS AND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
- EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CONSTRUCTION. EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE APPLIED AS A PERIMETER DEFENSE AGAINST THE TRANSPORTATION OF SILT AND SEDIMENTS OFF THE PROJECT SITE OR INTO ADJACENT WATER BODIES OR WETLANDS.
- THE CONTRACTOR SHALL PREPARE AND IMPLEMENT AN EROSION CONTROL PLAN AS PART OF THE SCOPE OF WORK COVERED BY THESE PLANS. THE CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICES IN CONTROLLING EROSION AND SEDIMENT TRANSPORT DURING CONSTRUCTION. THE FLORIDA DEVELOPMENT MANUAL "A GUIDE TO SOUND LAND & WATER MANAGEMENT" MAY BE USED AS REFERENCE FOR RECOMMENDED BEST MANAGEMENT PRACTICES RELATED TO EROSION AND SEDIMENT CONTROL.
- THE CONTRACTOR SHALL SUBMIT THE EROSION CONTROL PLAN TO THE OWNER FOR APPROVAL PRIOR TO THE PRE-CONSTRUCTION MEETING.
- ALL EROSION AND SEDIMENT CONTROL MEASURES WHICH ARE NECESSARY TO LIMIT THE TRANSPORT OF SILTS AND SEDIMENTS TO OUTSIDE THE LIMITS OF THE WORK AREA OR TO WATER BODIES OR WETLANDS ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE BEST MANAGEMENT PRACTICES AND IMPLEMENT STRUCTURAL MEASURES AS NEEDED TO PREVENT EROSION AND SEDIMENT TRANSPORT FROM THE WORK AREAS. THE FOLLOWING ARE MINIMUM RECOMMENDED GUIDELINES TO BE IMPLEMENTED DURING CONSTRUCTION AS PART OF THE EROSION AND SEDIMENT CONTROL PLAN:

A. STOCKPILING OF MATERIAL

NO EXCAVATED MATERIAL SHALL BE STOCKPILED IN SUCH A MANNER AS TO DIRECT RUNOFF DIRECTLY OFF THE PROJECT SITE OR INTO ANY ADJACENT WATER BODY OR STORMWATER COLLECTION FACILITY.

B. EXPOSED AREA LIMITATION & PROTECTION

THE SURFACE AREA OF OPEN, RAW ERODIBLE SOIL EXPOSED BY CLEARING AND GRUBBING OPERATIONS OR EXCAVATION AND FILLING OPERATIONS SHALL BE LIMITED AS NEEDED TO MINIMIZE THE POTENTIAL OF OFF-SITE SEDIMENT TRANSPORT. ALL EXPOSED AREAS SHALL BE PROTECTED BY INSTALLING EFFECTIVE EROSION AND SEDIMENT CONTROL MEASURES SUCH AS SILT SCREENS, SYNTHETIC HAY BALES, TURBIDITY BARRIERS, SWALES, OR A COMBINATION OF THESE AND OTHER MEASURES AS WARRANTED.

C. INLET PROTECTION

INLETS AND CATCH BASINS SHALL BE PROTECTED DURING CONSTRUCTION FROM SEDIMENT LADEN STORMWATER RUNOFF BY PROVIDING A COMBINATION OF SILT SCREENS, SYNTHETIC HAY BALES, FILTER FABRIC COVERS OR OTHER MEASURES AS NECESSARY TO CONTROL THE TRANSPORT OF SEDIMENT.

D. TEMPORARY GRASSING

AREAS OPENED BY CONSTRUCTION OPERATIONS THAT ARE NOT ANTICIPATED TO BE DRESSED OR RECEIVE FINAL GRASSING TREATMENT WITHIN THIRTY DAYS SHALL BE SEEDED WITH A QUICK GROWING GRASS SPECIES WHICH WILL PROVIDE AN EARLY COVER DURING THE SEASON IN WHICH IT IS PLANTED. TEMPORARY SEEDING SHALL BE CONTROLLED AS TO NOT ALTER OR COMPETE WITH PERMANENT GRASSING. SLOPES STEEPER THAN 6:1 SHALL ADDITIONALLY RECEIVE MULCHING OF APPROXIMATELY 2 INCHES OF LOOSE MEASURE OF MULCH MATERIAL CUT INTO THE SOIL OF THE SEEDED AREA TO A DEPTH OF 4 INCHES. THE SEEDED OR SEEDED AND MULCHED AREAS SHALL BE ROLLED AND WATERED AS NEEDED TO ENSURE OPTIMUM GROWING CONDITIONS FOR THE ESTABLISHMENT OF A GOOD GRASS COVER. IF AFTER 14 DAYS, THE TEMPORARY GRASSED AREAS HAVE NOT ATTAINED A MINIMUM OF 75% OF GOOD GRASS COVER, THE AREAS WILL BE REWORKED AND ADDITIONAL SEED APPLIED TO ESTABLISH THE DESIRED VEGETATION COVER.

E. MAINTENANCE

EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED DURING THE ENTIRE DURATION OF CONSTRUCTION. THE CONTRACTOR SHALL INSPECT THE EROSION AND CONTROL MEASURES ON A ROUTINE BASIS AND FOLLOWING RAINFALL EVENTS AND IMMEDIATELY REPAIR ANY OBSERVED DAMAGED CONTROLS. ALL EROSION AND SEDIMENT CONTROLS SHALL BE MAINTAINED AS TO FUNCTION PROPERLY WITHOUT THE TRANSPORT OF SEDIMENTS OUTSIDE THE LIMITS OF THE PROJECT.

EARTHWORK ACTIVITIES:

- THE DISPOSAL OF EXCESS EARTHWORK MATERIALS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. APPROVALS OF DISPOSAL SITES SHALL BE OBTAINED FROM THE ORANGE COUNTY AND JURISDICTIONAL REGULATORY AGENCIES PRIOR TO DISPOSAL. ALL EXCESS MATERIAL IS THE PROPERTY AND RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL MAKE NECESSARY ARRANGEMENTS WITH UTILITY SUPPLIERS FOR LOCATING, PROTECTING, AND/OR REMOVING THEIR FACILITIES, LINES AND EQUIPMENT. ANY DAMAGE TO KNOWN UTILITY LINES DURING CONSTRUCTION SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE BY CONTRACTOR'S FORCES IN A MANNER ACCEPTABLE TO THE OWNER AND UTILITY COMPANY AT NO COST TO THE OWNER. SHOULD UNCHARTED OR INCORRECTLY CHARTED PIPING OR OTHER UTILITIES BE ENCOUNTERED DURING EXCAVATION, THE CONTRACTOR SHALL CONSULT WITH UTILITY OWNER AND PROJECT ENGINEER IMMEDIATELY FOR DIRECTIONS. THE CONTRACTOR SHALL COOPERATE WITH OWNER AND UTILITY COMPANIES IN KEEPING RESPECTIVE SERVICES AND FACILITIES IN OPERATION.
- CONTRACTOR SHALL MAINTAIN ADEQUATE SUPERVISION AND CONTROL TO ENSURE THAT STABILITY OF EXCAVATED AND CONSTRUCTED SLOPES ARE NOT ADVERSELY AFFECTED BY RAIN WATER.
- CONTRACTOR SHALL MAINTAIN ADEQUATE SUPERVISION AND CONTROL TO ENSURE THAT EROSION IS CONTROLLED AND FLOODING OF EXCAVATION OR DAMAGE TO STRUCTURES DOES NOT OCCUR.
- CONTRACTOR SHALL PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT AND OTHER HAZARDS CREATED BY EARTHWORK OPERATIONS.

EARTHWORK ACTIVITIES CONT'D.:

- THE CONTRACTOR SHALL SLOPE SIDE SLOPES TO COMPLY WITH ALL FEDERAL, STATE AND LOCAL CODES AND REGULATIONS HAVING JURISDICTION. THE CONTRACTOR SHALL SLOPE AND BRACE WHERE SLOPING IS NOT POSSIBLE BECAUSE OF SPACE RESTRICTIONS OR STABILITY OF MATERIAL EXCAVATED. THE CONTRACTOR SHALL MAINTAIN STABILITY OF MATERIAL EXCAVATED IN A SAFE CONDITION UNTIL COMPLETION OF BACK FILLING.
- UNLESS OTHERWISE DIRECTED BY THE GEOTECHNICAL ENGINEER AND PRIOR TO THE PLACEMENT OF FILL, THE AREA TO BE FILLED WILL BE PROOF ROLLED UNDER THE SUPERVISION OF THE GEOTECHNICAL ENGINEER. ANY AREA SHOWING SIGNS OF PUMPING, WEAVING OR OTHER FORMS OF INSTABILITY SHALL BE SELECTIVELY REMOVED AND REPLACED WITH COMPACTED SELECT FILL.
- ALL DISTURBED AREAS MUST BE SODDED UNLESS OTHERWISE NOTED ON THE PLANS. ALL SODDING MUST BE DONE IN ACCORDANCE WITH SECTION 570 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
- ALL SOD ON SLOPES EXCEEDING 3:1 MUST BE PINNED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL NEWLY PLANTED GRASSES AND VEGETATION UNTIL THE WORK HAS BEEN ACCEPTED BY THE OWNER.

DRAINAGE NOTES:

- ALL DRAINAGE WORKS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ORANGE COUNTY CONSTRUCTION SPECIFICATIONS AND OTHER COUNTY GENERAL AND SPECIAL SPECIFICATIONS AND THE LATEST EDITION OF THE FLORIDA DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, UNLESS STATED OTHERWISE IN THE SPECIFICATIONS OR ON THE PLANS.
- THE LOCATIONS OF EXISTING UTILITIES AND STORM DRAINAGE SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR INACCURACY. PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE ARRANGEMENTS FOR FIELD LOCATIONS AND FOR ANY RELOCATIONS OF THE VARIOUS EXISTING UTILITIES WITH THE UTILITY OWNERS, WHICH SHALL BE DONE IN A TIMELY FASHION TO MINIMIZE IMPACT ON THE CONSTRUCTION SCHEDULE. ANY DELAY OR INCONVENIENCE CAUSED THE CONTRACTOR BY THE RELOCATION OF THE VARIOUS UTILITIES SHALL BE INCIDENTAL TO THE CONTRACT AND NO EXTRA COMPENSATION WILL BE ALLOWED.
- CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT ENGINEER OF ANY PROBLEMS REQUIRING DEVIATION FROM THESE PLANS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL SUBMIT DETAILED SHOP DRAWINGS OF ALL MAJOR ITEMS PROPOSED FOR THIS PROJECT TO THE ENGINEER PRIOR TO ORDERING ANY OF THE ITEMS. UPON THE CONTRACTOR'S RECEIPT OF APPROVED SHOP DRAWINGS FROM THE PROJECT ENGINEER, THE CONTRACTOR MAY PROCEED WITH THE WORK.
- STORM DRAINS SHALL BE REINFORCED CONCRETE PIPE, PER ASTM C-76 CLASS III, UNLESS OTHERWISE SPECIFIED. LIFTING HOLES ARE PROHIBITED.
- PIPE BEDDING SHALL BE IN ACCORDANCE WITH F.D.O.T. ROADWAY TRAFFIC AND DESIGN STANDARDS INDEX NO. 205.
- ALL STORM STRUCTURES SHALL CONFORM WITH FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS. INLETS SHALL HAVE TRAFFIC BEARING FRAMES AND COVERS OR GRATES MEETING HS-20 LOADING REQUIREMENTS.
- ALL MANHOLE COVERS SHALL INCLUDE THE ORANGE COUNTY LOGO AND BE IDENTIFIED AS "ORANGE COUNTY STORM", "ORANGE COUNTY WATER", OR "ORANGE COUNTY SANITARY" AS APPLICABLE.
- ALL MATERIALS, INSTALLATION AND TESTING SHALL BE IN ACCORDANCE WITH THE ORANGE COUNTY AND THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. WHERE THE SPECIFICATIONS CONFLICT, THE MAXIMUM REQUIREMENTS OF EITHER SPECIFICATION SHALL APPLY.
- THE PROJECT ENGINEER SHALL BE CONSULTED FOR ANY AND ALL REQUIRED INTERPRETATIONS OF THE PLANS AND TO GIVE SUPPLEMENTARY INSTRUCTIONS TO ACCOMPLISH THE INTENT OF THE PLANS.

MAINTENANCE OF TRAFFIC NOTES:

- THE CONTRACTOR SHALL FURNISH, ERECT AND MAINTAIN ALL NECESSARY TRAFFIC CONTROL AND SAFETY DEVICES IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND THE LATEST FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN STANDARDS.

GEOTECHNICAL AND TESTING NOTES:

- THE CONTRACTOR SHALL ENSURE THAT PROPER SOIL DENSITIES ARE ACHIEVED FOR THE PLACEMENT OF ALL STRUCTURES OR COMPACTED EARTH. SOIL TESTING SHALL BE PROVIDED BY THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER'S CONSULTANT FOR SCHEDULING ALL TESTING AND SHALL PROVIDE SUFFICIENT NOTICE FOR TESTING WORK.
- ALL SOIL STRIPPINGS, DELETERIOUS AND UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR UNLESS OTHERWISE DIRECTED BY THE OWNER OR SPECIFIED ELSEWHERE IN THE PLANS FOR SELECT DISPOSAL. IN NO CASE WILL BURIAL OF DISPOSABLE MATERIAL BE ALLOWED.

MISCELLANEOUS NOTES:

- THE CONTRACTOR SHALL USE EXTREME CAUTION AND CARE TO ENSURE THAT THEIR WORK AREA IS PROTECTED AT ALL TIMES. THE CONTRACTOR SHALL SECURE THEIR WORK AREA AND MATERIALS DURING CONSTRUCTION AND AT THE END OF THE EACH WORK DAY TO PROVIDE FOR THE SAFETY OF ALL PERSONS.

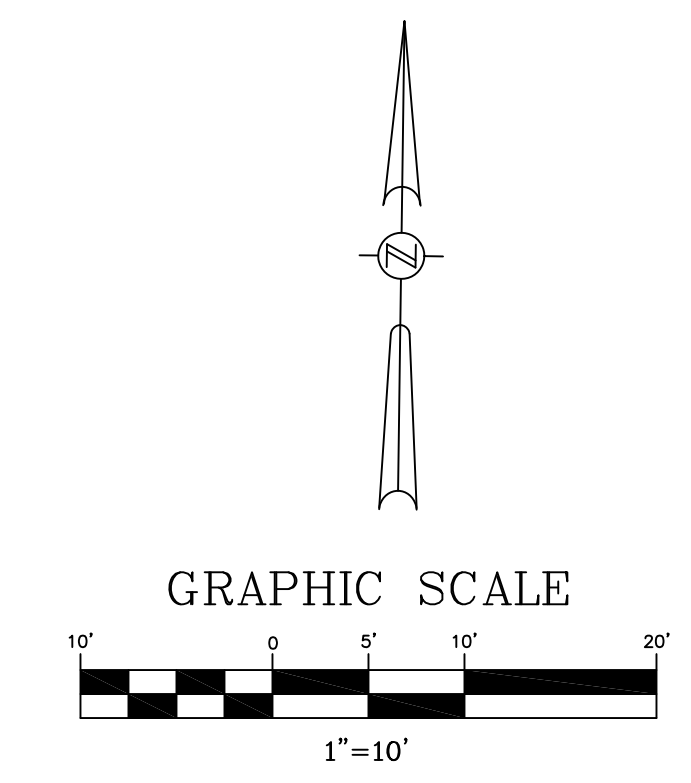
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK					
	DATE	REVISIONS	BY	CHECKED	

LITTLE LAKE FAIRVIEW DW-039
AND LAKE FAIR DW-032
DRAINAGE WELL REPLACEMENT
ORANGE COUNTY, FLORIDA

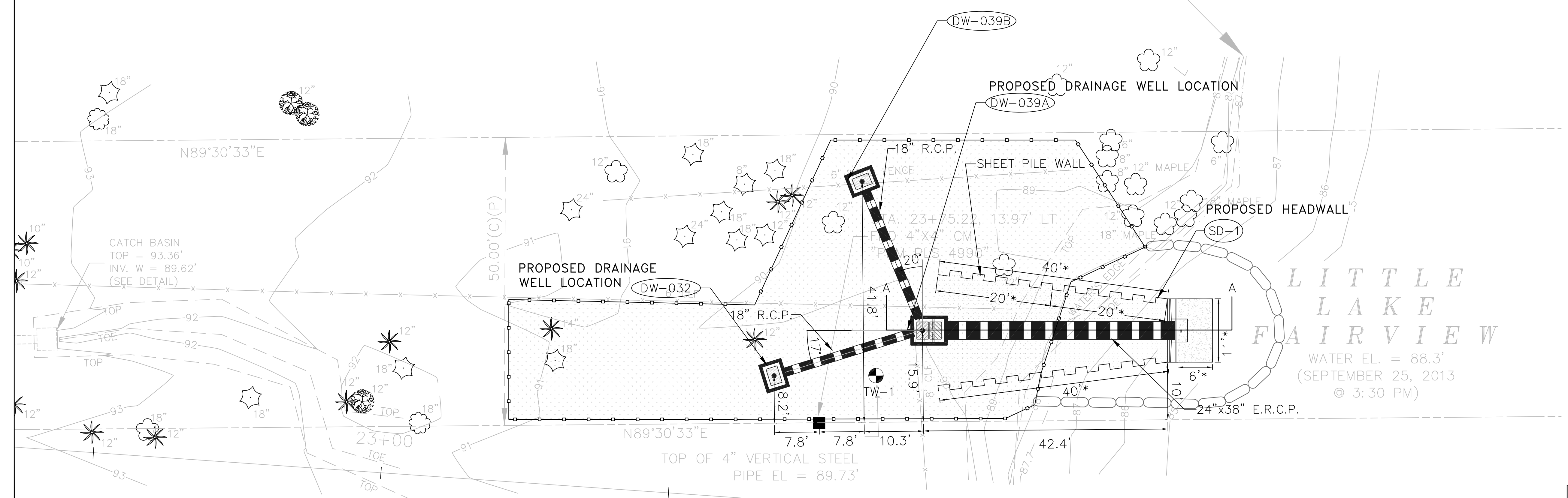


NOTES & SPECIFICATIONS

DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
SJS	VP	SJS/DS	DS
PROJECT NO. 13-092			
SCALE N/A			
DATE FEBRUARY 2014			
SHEET NO. 5			
SHEET 5 OF 12			
100% SUBMITTAL - FOR CONSTRUCTION			

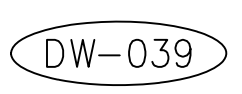





LITTLE LAKE FAIRVIEW NORMAL HIGH
 WATER ELEVATION = 88.7'(NGVD29)
 PER ORANGE COUNTY STORMWATER
 MANAGEMENT DEPARTMENT LAKE
 INDEX ELEVATION = 87.7'(NAVD88)



LITTLE
 LAKE
 FAIRVIEW
 WATER EL. = 88.3'
 (SEPTEMBER 25, 2013
 @ 3:30 PM)

LEGEND

-  PROPOSED DRAINAGE WELL STRUCTURE
-  PROPOSED HEADWALL
-  TEST WELL LOCATION
-  WORK AREA

NOTE:
 ALL DIMENSIONS ARE PERPENDICULAR TO THE RIGHT OF WAY LINE
 HAVING A BEARING OF N89°30'33\"/>

SITE BENCHMARK 1
 STA. 23+26.54, 22.48' RT
 SET RAILROAD SPIKE IN
 12\"/>

END OF SURVEY
 PROPOSED SITE
 STA. 23+86.42
 SET 5/8\"/>

NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK				
DATE	REVISIONS	BY	CHECKED	

LITTLE LAKE FAIRVIEW DW-039
 AND LAKE FAIR DW-032
 DRAINAGE WELL REPLACEMENT
 ORANGE COUNTY, FLORIDA



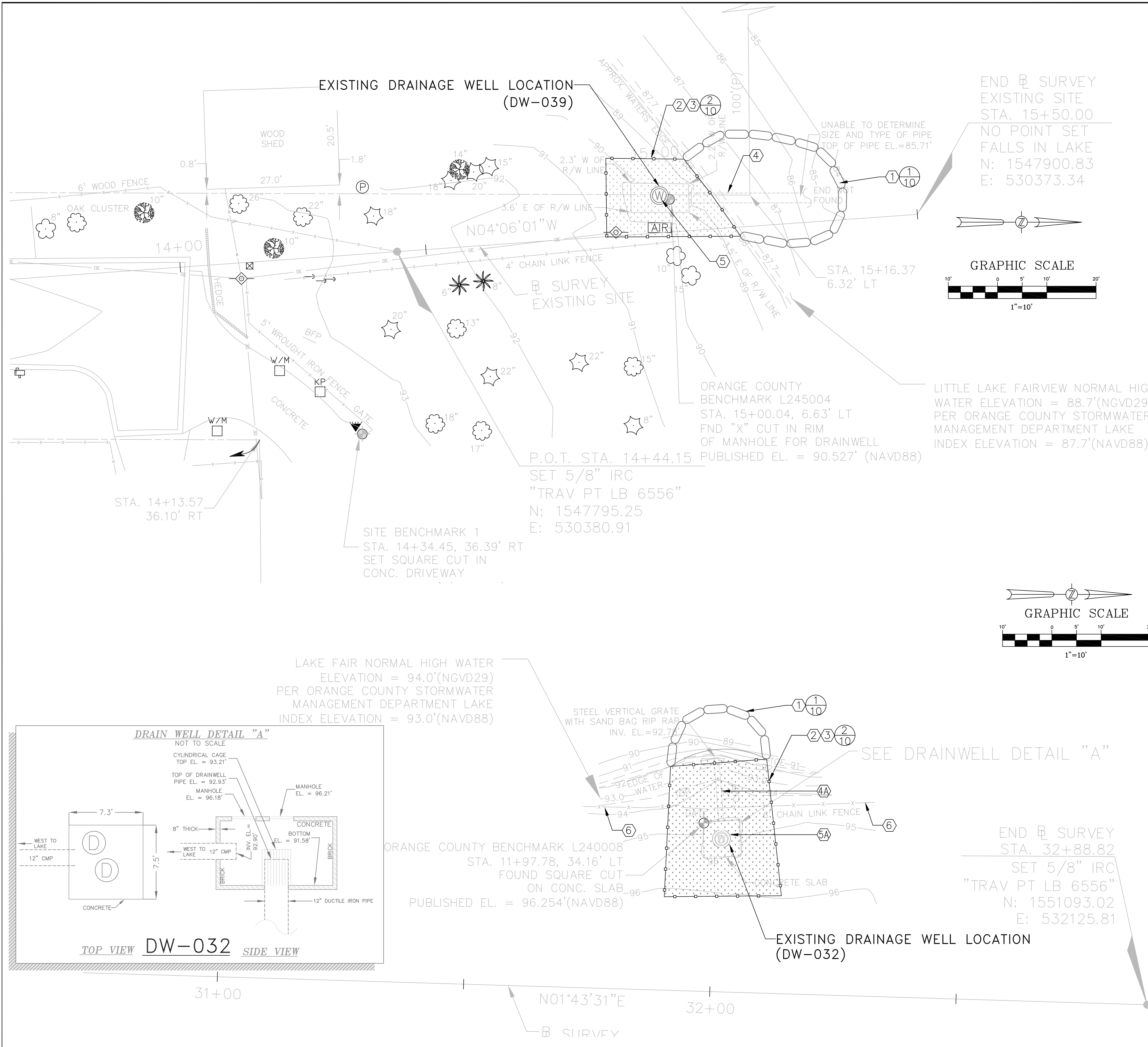
PROPOSED DRAINAGE WELLS
 SITE LOCATION PLAN FOR DW-039 & DW-032

DESIGNED BY SJS	DRAWN BY VP	CHECKED BY SJS/DS	APPROVED BY DS
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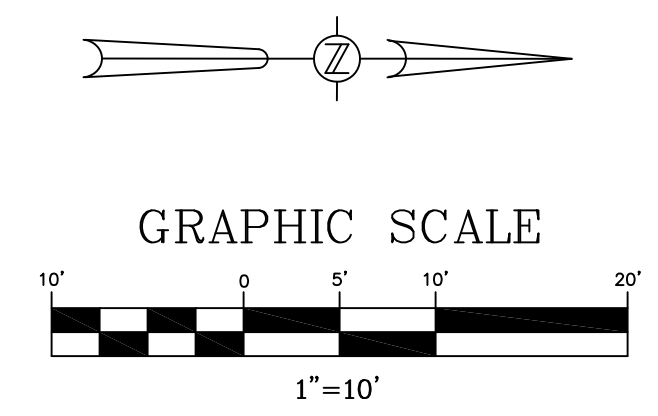
PROJECT NO. 13-092
SCALE 1" = 10'
DATE FEBRUARY 2014
SHEET NO. 6
SHEET 6 OF 12

100% SUBMITTAL - FOR CONSTRUCTION

DEVO SEERERAM, Ph.D., P.E.
 REGISTRATION NO. 48303



END OF SURVEY
EXISTING SITE
STA. 15+50.00
NO POINT SET
FALLS IN LAKE
N: 1547900.83
E: 530373.34



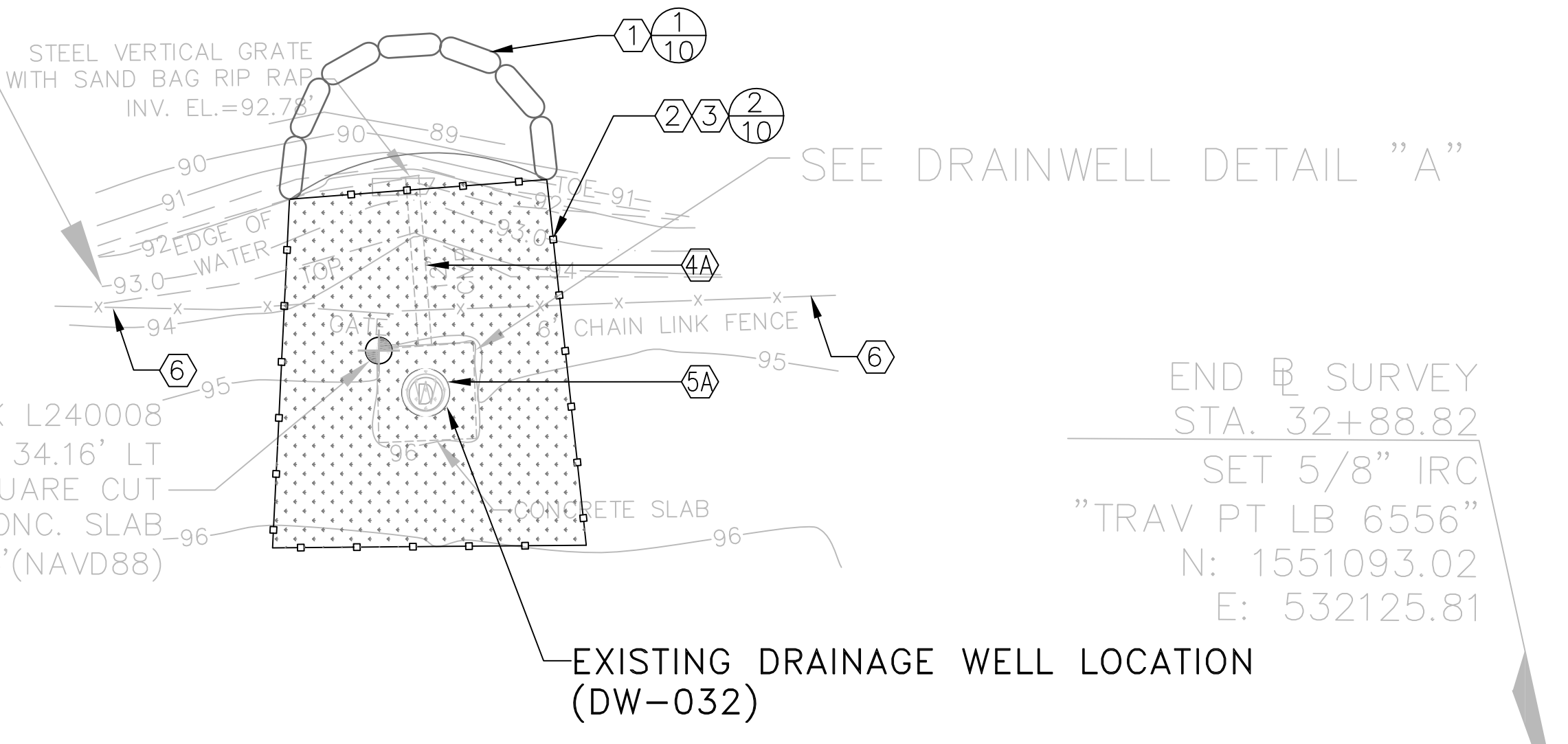
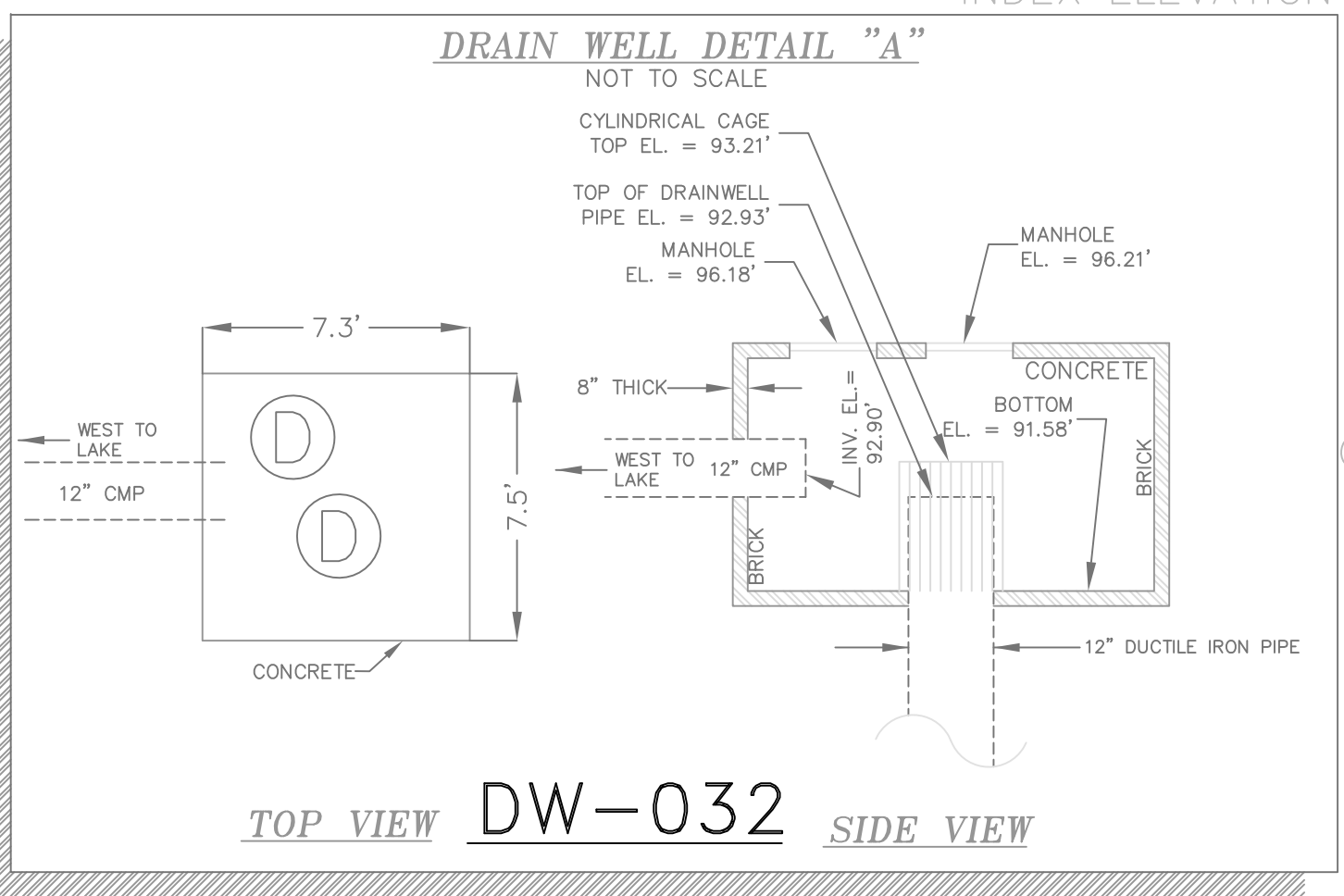
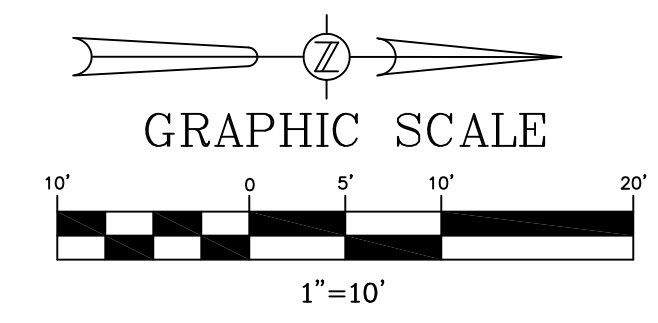
LITTLE LAKE FAIRVIEW NORMAL HIGH WATER ELEVATION = 88.7'(NGVD29)
PER ORANGE COUNTY STORMWATER MANAGEMENT DEPARTMENT LAKE INDEX ELEVATION = 87.7'(NAVD88)

ORANGE COUNTY BENCHMARK L245004
STA. 15+00.04, 6.63' LT
FND "X" CUT IN RIM OF MANHOLE FOR DRAINWELL
PUBLISHED EL. = 90.527' (NAVD88)

P.O.T. STA. 14+44.15
SET 5/8" IRC
"TRAV PT LB 6556"
N: 1547795.25
E: 530380.91

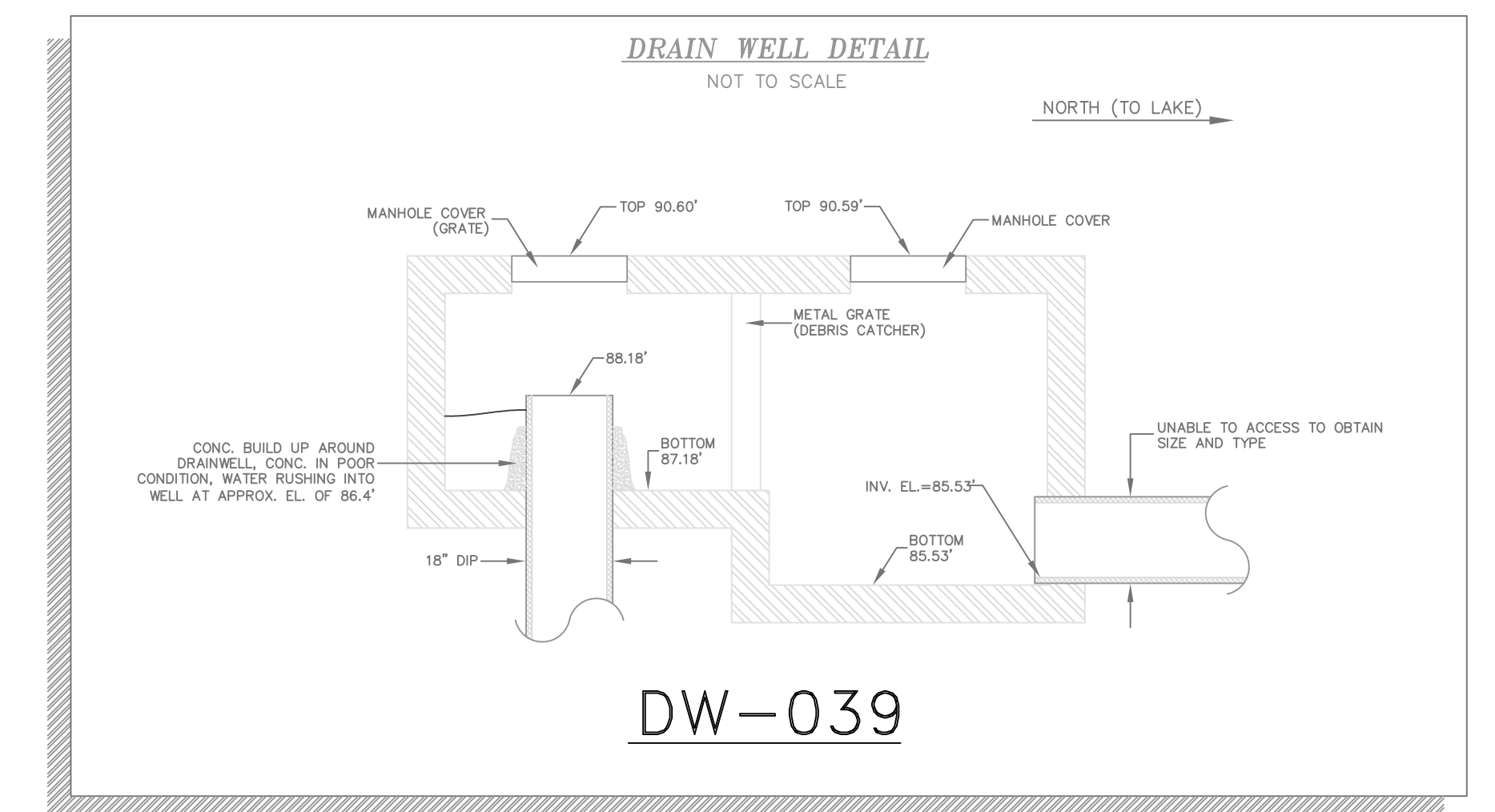
SITE BENCHMARK 1
STA. 14+34.45, 36.39' RT
SET SQUARE CUT IN CONC. DRIVEWAY

LAKE FAIR NORMAL HIGH WATER ELEVATION = 94.0'(NGVD29)
PER ORANGE COUNTY STORMWATER MANAGEMENT DEPARTMENT LAKE INDEX ELEVATION = 93.0'(NAVD88)



END OF SURVEY
STA. 32+88.82
SET 5/8" IRC
"TRAV PT LB 6556"
N: 1551093.02
E: 532125.81

ORANGE COUNTY BENCHMARK L240008
STA. 11+97.78, 34.16' LT
FOUND SQUARE CUT ON CONC. SLAB
PUBLISHED EL. = 96.254'(NAVD88)



DEMOLITION NOTES

1. THE LOCATIONS, ELEVATIONS, & DIMENSIONS OF EXISTING UTILITIES & OTHER FEATURES ARE SHOWN ON THE PLANS ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PLAN PREPARATION. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS, & DIMENSIONS OF ALL EXISTING UTILITIES & OTHER FEATURES AFFECTING THE WORK PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES WHICH MAY AFFECT THE PROPOSED WORK.
2. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES BEFORE EXCAVATION.
3. ALL TRASH, DEBRIS, & OTHER MATERIAL REMOVED FROM THE SITE SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS.
4. ALL EXCAVATED TRENCHES ARE TO BE BACKFILLED WITH SELECT FILL COMPACTED TO A MINIMUM OF 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY VALUE (AASHTO T-180).
5. THE CONTRACTOR SHALL CONTACT THE GAS UTILITY FOR LOCATION BEFORE EXCAVATION. CHAPTER 17-153 F.S. REQUIRES THAT AN EXCAVATOR NOTIFIES ALL GAS UTILITIES AT LEAST TWO DAYS PRIOR TO EXCAVATING. ALSO CALL 1-800-432-4770 FOR SUNSHINE LOCATES. F.S. 556.101 THROUGH 111.

LEGEND

- EXISTING DRAINAGE WELL STRUCTURE
- WORK AREA
- SECTION NUMBER SHEET NUMBER

EXISTING DRAINAGE WELL AREA KEYNOTES

1. TYPE I FLOATING TURBIDITY BARRIER, TYPICAL.
2. TYPE III SILT FENCE, TYPICAL.
3. WORK AREA WITHIN SILT FENCE TO BE GRADED, COMPACTED AND SODDED TO MATCH ADJACENT AREAS AND WILL BE PAID FOR UNDER ITEMS (DW-039 & DW-032) - 11 & 21. ANY AREA(S) DISTURBED OUTSIDE OF THE SILT FENCE SHALL BE REINSTATED TO THE ORIGINAL OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE.
4. EXISTING STORM PIPE TO BE COMPLETELY REMOVED FOR DW-039 (MAX. LENGTH OF 25').
- 4A. EXISTING STORM PIPE AND INFLOW STRUCTURE TO BE COMPLETELY REMOVED FOR DW-032.
5. EXISTING DRAINAGE WELL (DW-039) TO BE PROPERLY ABANDONED BY A LICENSED WELL CONTRACTOR IN ACCORDANCE WITH F.D.E.P. & S.J.R.W.M.D. REQUIREMENTS. THE EXISTING WELL STRUCTURE & INFLOW PIPE SHALL BE COMPLETELY REMOVED AND DISPOSED OF OFFSITE THE AREA SHALL BE PROPERLY REINSTATED TO MATCH ADJACENT AREAS FILLED WITH CLEAN SAND.
- 5A. EXISTING DRAINAGE WELL (DW-032) TO BE PROPERLY ABANDONED BY A LICENSED WELL CONTRACTOR IN ACCORDANCE WITH F.D.E.P. & S.J.R.W.M.D. REQUIREMENTS. THE EXISTING WELL STRUCTURE & INFLOW PIPE SHALL BE COMPLETELY REMOVED AND DISPOSED OF OFFSITE. THE AREA SHALL BE PROPERLY REINSTATED TO MATCH ADJACENT AREAS FILLED WITH CLEAN SAND.
6. EXISTING CHAINLINK FENCE TO BE TEMPORARY REMOVED FOR DEMOLITION OF INFLOW PIPE AND REPLACED UPON COMPLETION.

NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK				
DATE	REVISIONS	BY	CHECKED	

LITTLE LAKE FAIRVIEW DW-039
AND LAKE FAIR DW-032
DRAINAGE WELL REPLACEMENT
ORANGE COUNTY, FLORIDA



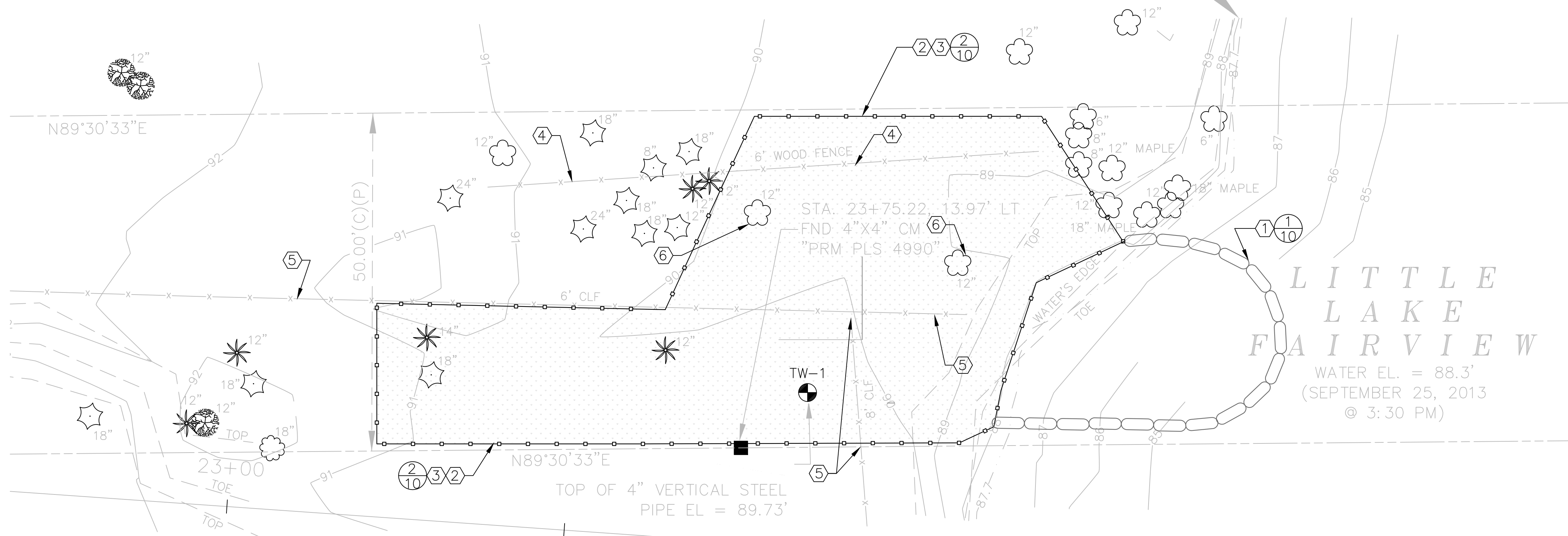
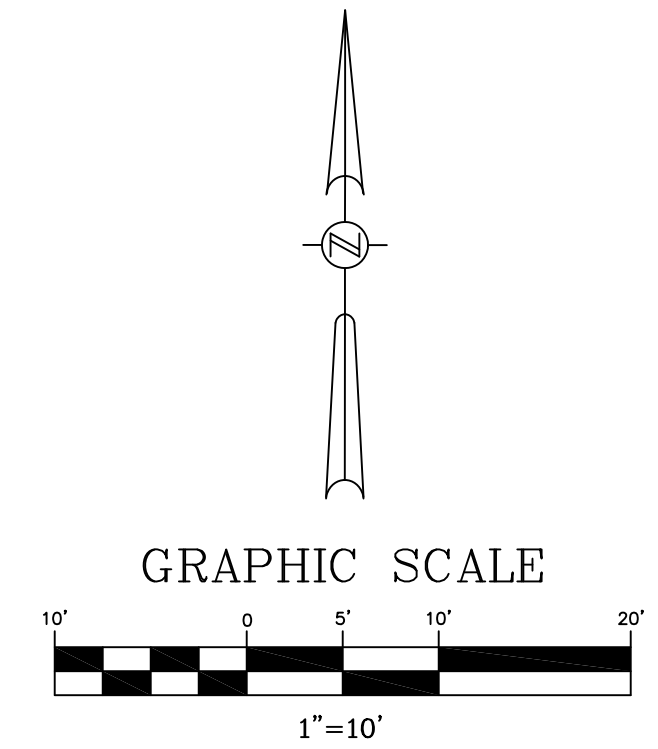
**DRAINAGE WELL DEMOLITION & ABANDONMENT
PLANS FOR DW-032 & DW-039**

DESIGNED BY SJS	DRAWN BY VP	CHECKED BY SJS/DS	APPROVED BY DS
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PROJECT NO. 13-092	SCALE 1" = 10'
DATE FEBRUARY 2014	SHEET NO. 7
SHEET 7 OF 12	
100% SUBMITTAL - FOR CONSTRUCTION	

DEVO SEEREERAM, Ph.D., P.E.
REGISTRATION NO. 48303

LITTLE LAKE FAIRVIEW NORMAL HIGH
 WATER ELEVATION = 88.7'(NGVD29)
 PER ORANGE COUNTY STORMWATER
 MANAGEMENT DEPARTMENT LAKE
 INDEX ELEVATION = 87.7'(NAVD88)



DEMOLITION NOTES

1. THE LOCATIONS, ELEVATIONS, & DIMENSIONS OF EXISTING UTILITIES & OTHER FEATURES ARE SHOWN ON THE PLANS ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PLAN PREPARATION. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS, & DIMENSIONS OF ALL EXISTING UTILITIES & OTHER FEATURES AFFECTING THE WORK PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES WHICH MAY AFFECT THE PROPOSED WORK.
2. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES BEFORE EXCAVATION.
3. ALL TRASH, DEBRIS, & OTHER MATERIAL REMOVED FROM THE SITE SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS.
4. ALL EXCAVATED TRENCHES ARE TO BE BACKFILLED WITH SELECT FILL COMPACTED TO A MINIMUM OF 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY VALUE (AASHTO T-180).
5. THE CONTRACTOR SHALL CONTACT THE GAS UTILITY FOR LOCATION BEFORE EXCAVATION. CHAPTER 17-153 F.S. REQUIRES THAT AN EXCAVATOR NOTIFIES ALL GAS UTILITIES AT LEAST TWO DAYS PRIOR TO EXCAVATING. ALSO CALL 1-800-432-4770 FOR SUNSHINE LOCATES. F.S. 556.101 THROUGH 111.

LEGEND

WORK AREA

TW-1 TEST WELL LOCATION

SECTION NUMBER SHEET NUMBER

EXISTING DRAINAGE WELL AREA KEYNOTES

1. TYPE I FLOATING TURBIDITY BARRIER, TYPICAL.
2. TYPE III SILT FENCE, TYPICAL.
3. WORK AREA WITHIN SILT FENCE TO BE GRADED, COMPACTED AND SODDED TO MATCH ADJACENT AREAS AND WILL BE PAID FOR UNDER ITEMS (DW-039 & DW-032) 11 & 21. ANY AREA(S) DISTURBED OUTSIDE OF THE SILT FENCE SHALL BE REINSTATED TO THE ORIGINAL OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE.
4. EXISTING WOOD FENCE TO BE TEMPORARILY REMOVED FOR CONSTRUCTION OF THE NEW DRAINAGE WELLS AND REPLACED AT THE NORTHERN DRAINAGE EASEMENT LIMIT UPON COMPLETION.
5. EXISTING CHAINLINK FENCE TO BE REMOVED FOR THE CONSTRUCTION OF THE NEW DRAINAGE WELL STRUCTURES, AND REPLACED AT THE SOUTHERN DRAINAGE EASEMENT LIMIT UPON COMPLETION.
6. EXISTING TREE TO BE REMOVED.

SITE BENCHMARK 1
 STA. 23+26.54, 22.48' RT
 SET RAILROAD SPIKE IN
 12" CYPRESS TREE
 EL. = 92.37' (NAVD88)

END OF SURVEY
 PROPOSED SITE
 STA. 23+86.42
 SET 5/8" IRC
 "TRAV PT LB 6556"
 N: 1547405.11
 E: 530767.82

LITTLE
 LAKE
 FAIRVIEW
 WATER EL. = 88.3'
 (SEPTEMBER 25, 2013
 @ 3:30 PM)

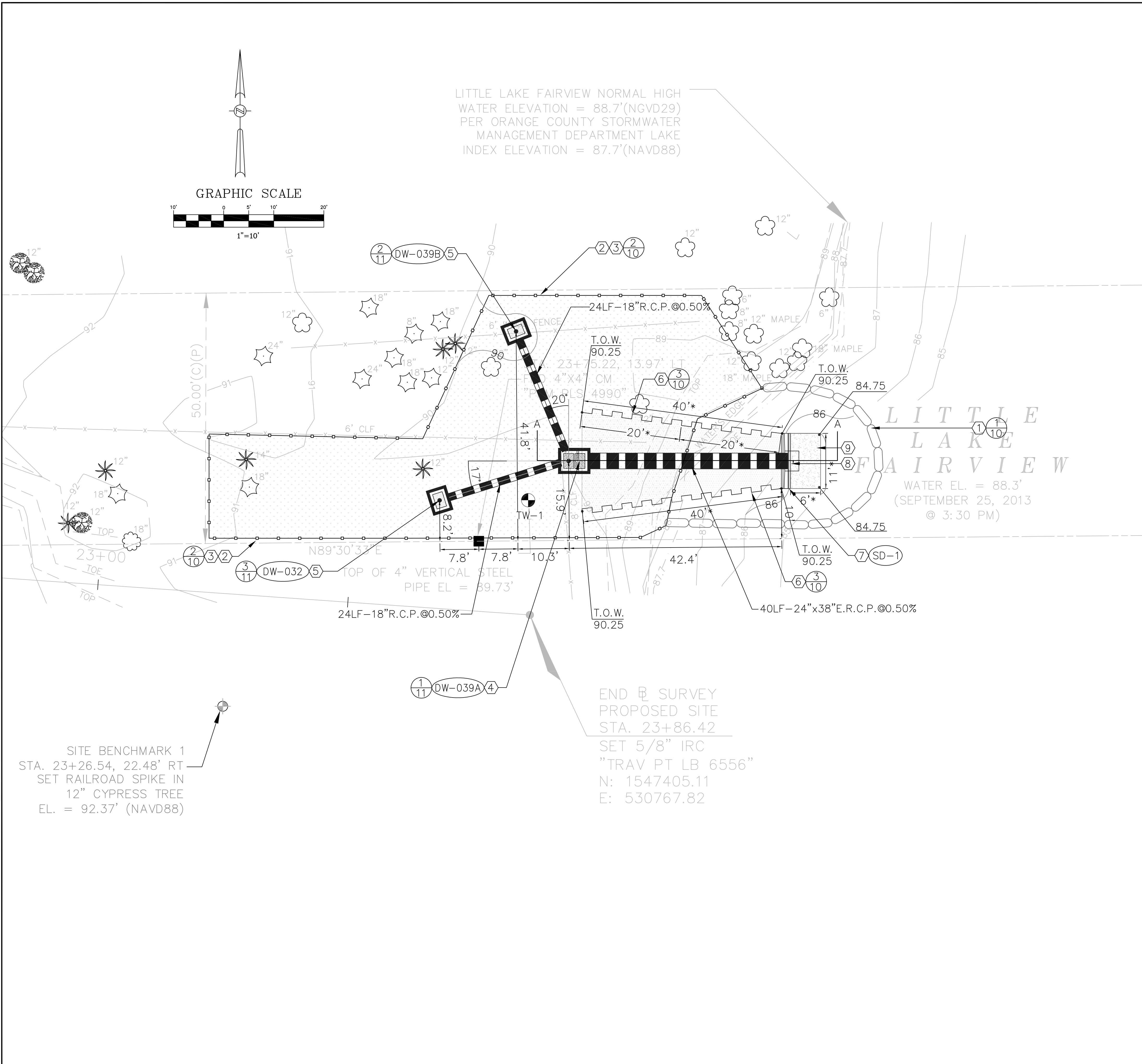
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK			
DATE	REVISIONS	BY	CHECKED

LITTLE LAKE FAIRVIEW DW-039
 AND LAKE FAIR DW-032
 DRAINAGE WELL REPLACEMENT
 ORANGE COUNTY, FLORIDA



SITE DEMOLITION PLAN			
DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
SJS	VP	SJS/DS	DS
PROJECT NO. 13-092		SCALE 1" = 10'	
DATE FEBRUARY 2014		SHEET NO. 8	
SHEET 8 OF 12		100% SUBMITTAL - FOR CONSTRUCTION	

DEVO SEEREERAM, Ph.D., P.E.
 REGISTRATION NO. 48303



PROPOSED DRAINAGE WELL KEYNOTES

- TYPE I FLOATING TURBIDITY BARRIER, TYPICAL.
- TYPE III SILT FENCE, TYPICAL.
- WORK AREA WITHIN SILT FENCE TO BE GRADED, COMPACTED AND SODDED AND WILL BE PAID FOR UNDER ITEMS (DW-039 & DW-032) 11 & 21. ANY AREA(S) DISTURBED OUTSIDE OF THE SILT FENCE SHALL BE REINSTATED TO THE ORIGINAL OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE.
- MODIFIED TYPE J INLET, DRAINAGE WELL STRUCTURE WITH ADJUSTABLE WEIR.
- MODIFIED TYPE D INLET, DRAINAGE WELL STRUCTURE.
- PROPOSED SHEET PILE WALL.
- PROPOSED HEADWALL INFLOW STRUCTURE W/ SKIMMER.
- TRASH RACK.
- PROPOSED 6'x11' BROKEN CONCRETE RIPRAP PER SECTION 530 (F.D.O.T DESIGN STANDARDS & STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION, LATEST EDITION.)

GRADING NOTE

- ALL DISTURBED AREAS SHALL BE FINAL GRADED TO MATCH EXISTING UNDISTURBED GRADES & SHALL BE SODDED AS REQUIRED. REFER TO SHEET 4 OF 12, EARTHWORK ACTIVITIES.

SITE NOTE

- WORK AREA WITHIN SILT FENCE TO BE SODDED UNDER PAY ITEMS (DW-039 & DW-032) 21 & 11. ALL OTHER DISTURBED AREAS TO BE REINSTATED AT CONTRACTOR'S EXPENSE
- ALL EXCAVATED TRENCHES ARE TO BE BACKFILLED WITH SELECT FILL COMPACTED TO A MINIMUM OF 95 % OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY VALUE (AASHTO T-180).
- THE CONTRACTOR SHALL CONTACT THE GAS UTILITY FOR LOCATION BEFORE EXCAVATION. CHAPTER 17-153 F.S. REQUIRES THAT AN EXCAVATOR NOTIFIES ALL GAS UTILITIES AT LEAST TWO DAYS PRIOR TO EXCAVATING. ALSO CALL 1-800-432-4770 FOR SUNSHINE LOCATES. F.S. 556.101 THROUGH 111.

STRUCTURE LEGEND

<p>DW-039A</p> <p>4'-1"x5'-4" MODIFIED TYPE "J" (PRECAST) (*) DRAINAGE WELL STRUCTURE PER F.D.O.T. INDEX No. "200" W/24"x36" (2) ACCESS HATCHES IN TOP SLAB STRUCTURE TOP ELEV. 90.40 ADJUSTABLE WEIR TOP ELEV. 89.18 ADJUSTABLE WEIR BOT. ELEV. 87.18 WEIR WALL BOT. ELEV. 85.50 (**) 24"x38" E.R.C.P. PIPE INVERT ELEV. 85.80 (E) 18" R.C.P. PIPE INVERT ELEV. 85.80 (SW) 18" R.C.P. PIPE INVERT ELEV. 85.80 (NW) TOP OF 12" WELL CASING ELEV. 87.18 STRUCTURE BOTTOM ELEV. 85.50</p> <p>(*) SIZE IS THE INSIDE DIMENSION OF THE STRUCTURE (**) WEIR WALL SHALL BE PRECAST AS PART OF THE STRUCTURE UNLESS OTHERWISE APPROVED BY THE ENGINEER.</p>	<p>DW-039B</p> <p>MODIFIED TYPE "D" INLET (PRECAST) (*) DRAINAGE WELL STRUCTURE W/24"x36" ACCESS HATCH IN TOP SLAB PER F.D.O.T. INDEX No. "232" STRUCTURE TOP ELEV. 90.20 18" R.C.P. PIPE INVERT ELEV. 85.68 S TOP OF 12" WELL CASING ELEV. 87.18 STRUCTURE BOTTOM ELEV. 85.43</p>
<p>DW-032</p> <p>MODIFIED TYPE "D" INLET (PRECAST) (*) DRAINAGE WELL STRUCTURE W/24"x36" ACCESS HATCH IN TOP SLAB PER F.D.O.T. INDEX No. "232" STRUCTURE TOP ELEV. 90.40 18" R.C.P. PIPE INVERT ELEV. 85.68 E TOP OF 12" WELL CASING ELEV. 87.18 STRUCTURE BOTTOM ELEV. 85.43</p>	<p>SD-1</p> <p>INFLOW STRUCTURE MODIFIED F.D.O.T. HEADWALL (36") PER F.D.O.T. INDEX "250" STRUCTURE TOP ELEV. 90.25 24"x38"E.R.C.P. PIPE INVERT ELEV.(INFLOW) 86.00 SKIMMER TOP ELEV. 90.25 SKIMMER BOTTOM ELEV. 85.50</p>

LEGEND

- WORK AREA.
- FILL AREA BETWEEN SHEET PILE WALL TO ELEVATION 90.25 FT.
- TW-1 TEST WELL LOCATION
- SECTION NUMBER SHEET NUMBER

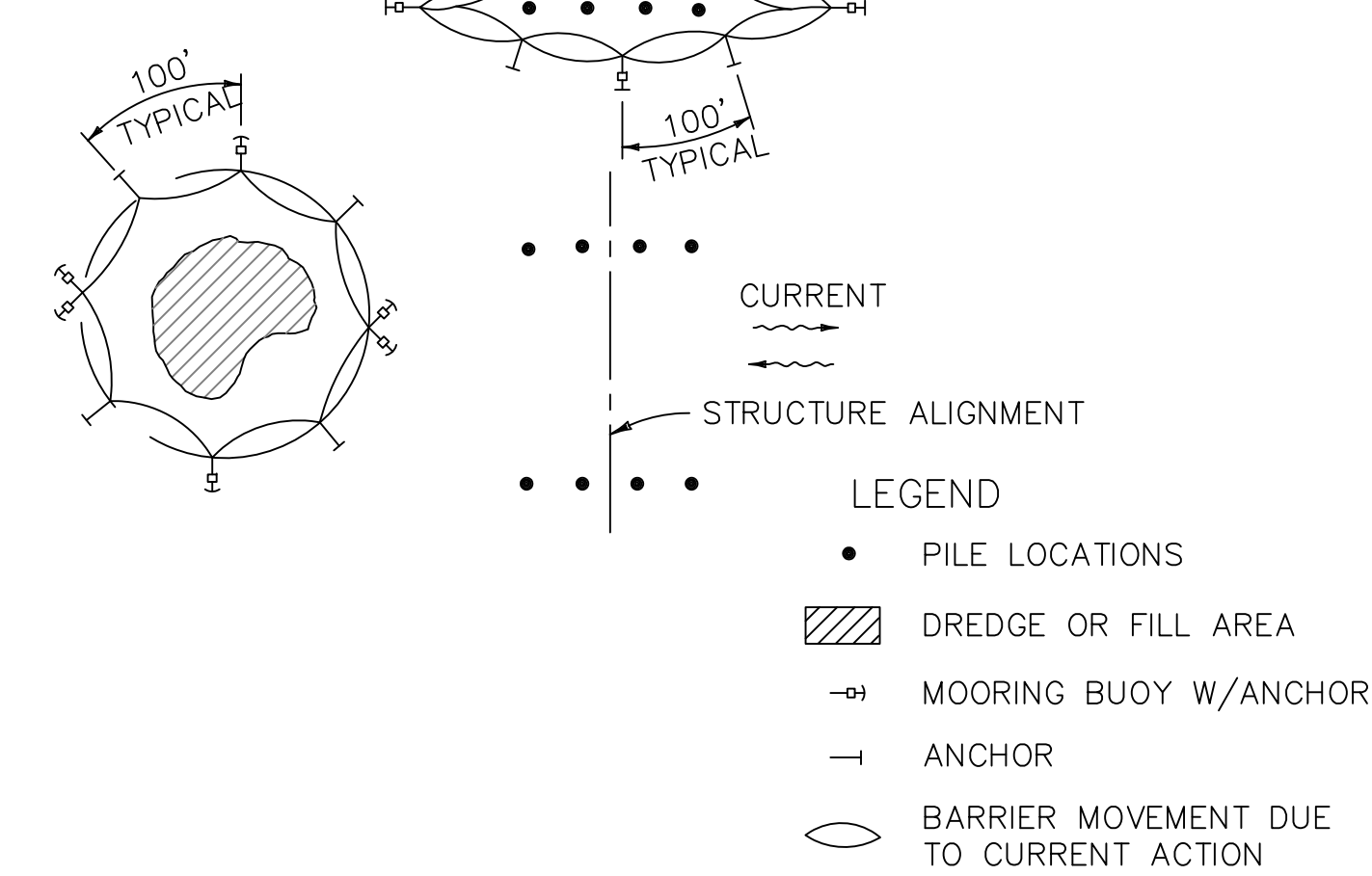
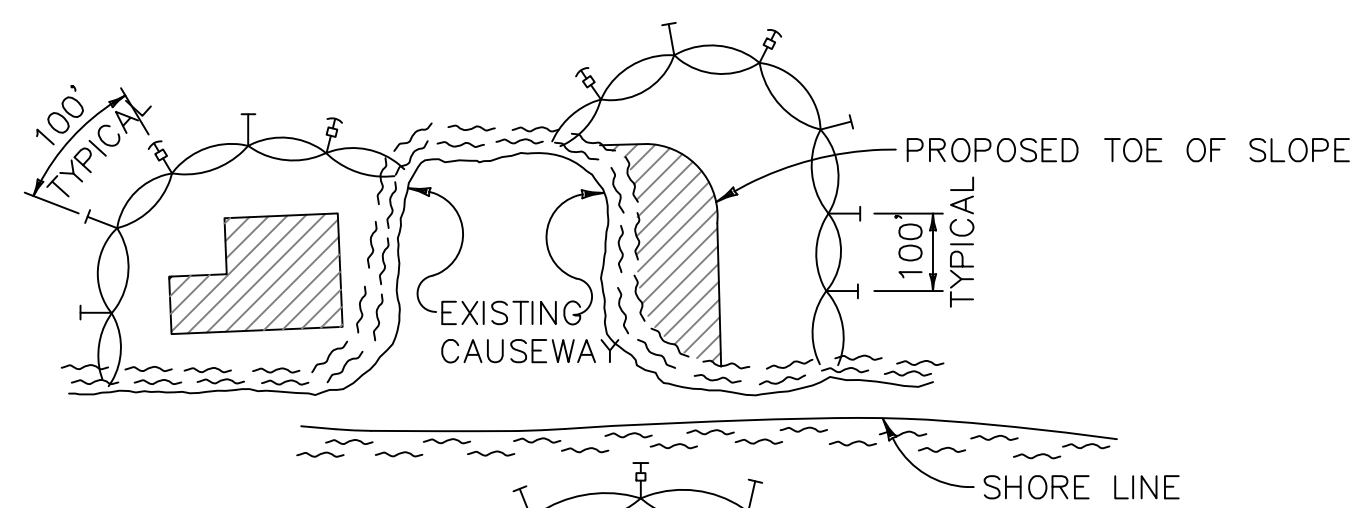
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK			
DATE	REVISIONS	BY	CHECKED

LITTLE LAKE FAIRVIEW DW-039 AND LAKE FAIR DW-032 DRAINAGE WELL REPLACEMENT ORANGE COUNTY, FLORIDA



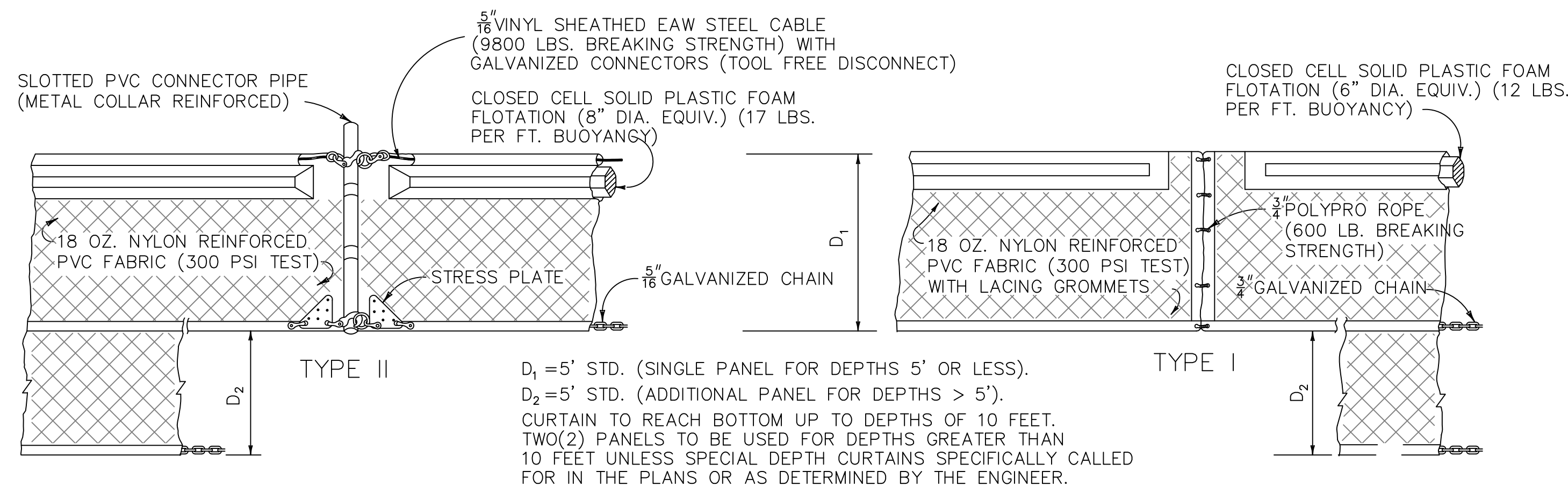
PROPOSED DRAINAGE WELLS REPLACEMENT PLAN FOR DW-039 & DW-032			
DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
SJS	VP	SJS/DS	DS

PROJECT NO.	13-092
SCALE	1" = 10'
DATE	FEBRUARY 2014
SHEET NO.	9
SHEET	9 OF 12



- NOTES:
- TURBIDITY BARRIERS ARE TO BE USED IN ALL PERMANENT BODIES OF WATER REGARDLESS OF WATER DEPTH.
 - NUMBER AND SPACING OF ANCHORS DEPENDENT ON CURRENT VELOCITIES.
 - DEPLOYMENT OF BARRIER AROUND PILE LOCATIONS MAY VARY TO ACCOMMODATE CONSTRUCTION OPERATIONS.
 - NAVIGATION MAY REQUIRE SEGMENTING BARRIER DURING CONSTRUCTION OPERATIONS.
 - FOR ADDITIONAL INFORMATION SEE SECTION 104 OF THE STANDARD SPECIFICATIONS.

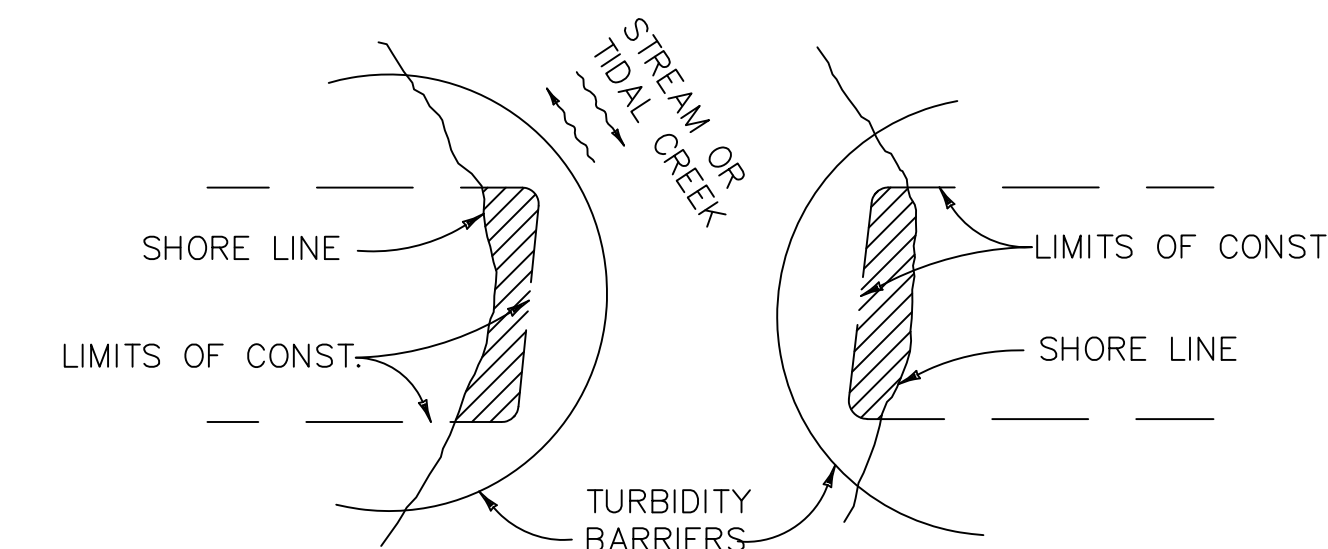
TURBIDITY BARRIER APPLICATIONS



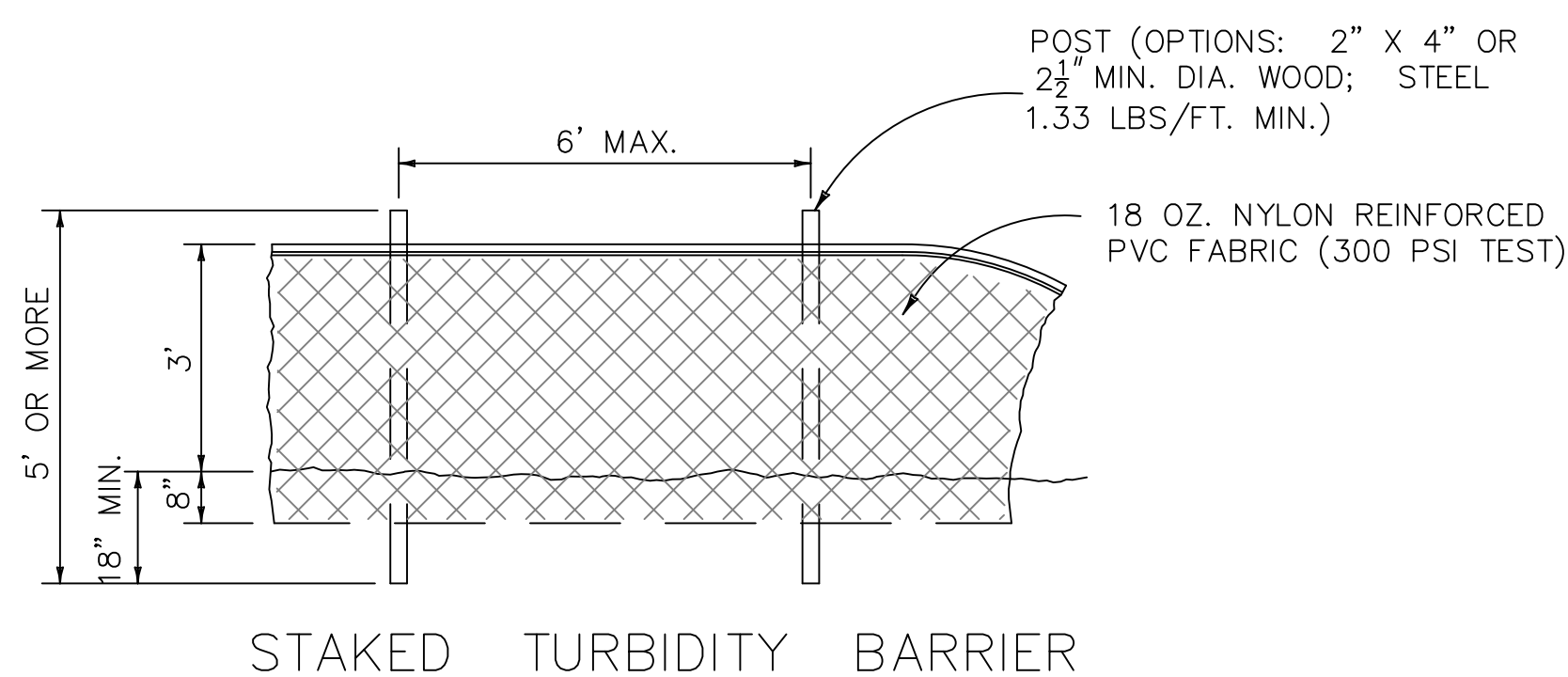
$D_1 = 5'$ STD. (SINGLE PANEL FOR DEPTHS 5' OR LESS).
 $D_2 = 5'$ STD. (ADDITIONAL PANEL FOR DEPTHS > 5').
 CURTAIN TO REACH BOTTOM UP TO DEPTHS OF 10 FEET. TWO(2) PANELS TO BE USED FOR DEPTHS GREATER THAN 10 FEET UNLESS SPECIAL DEPTH CURTAINS SPECIFICALLY CALLED FOR IN THE PLANS OR AS DETERMINED BY THE ENGINEER.

NOTICE:
 COMPONENTS OF TYPES I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.

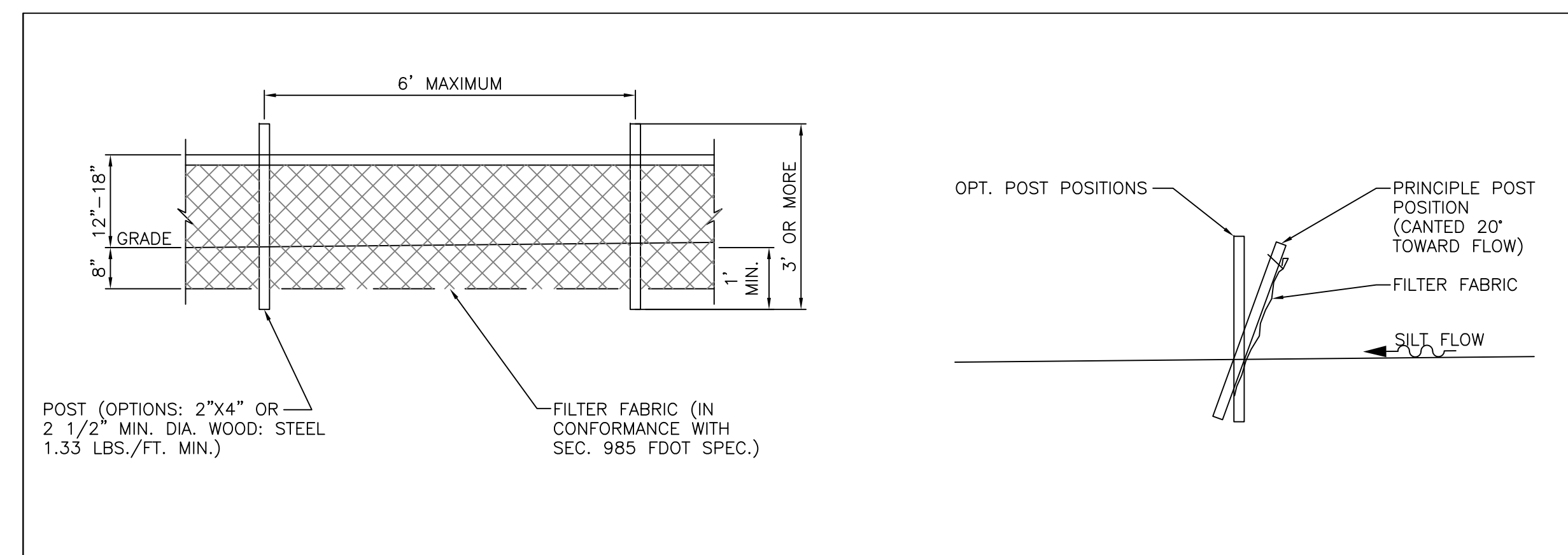
FLOATING TURBIDITY BARRIERS



NOTE:
 TURBIDITY BARRIERS FOR FLOWING STREAMS AND TIDAL CREEKS MAY BE EITHER FLOATING, OR STAKED TYPES OR ANY COMBINATIONS OF TYPES THAT WILL SUIT SITE CONDITIONS AND MEET EROSION CONTROL AND WATER QUALITY REQUIREMENTS. THE BARRIER TYPE(S) WILL BE AT THE CONTRACTOR'S OPTION UNLESS OTHERWISE SPECIFIED IN THE PLANS. POSTS IN STAKED TURBIDITY BARRIERS TO BE INSTALLED IN VERTICAL POSITION UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

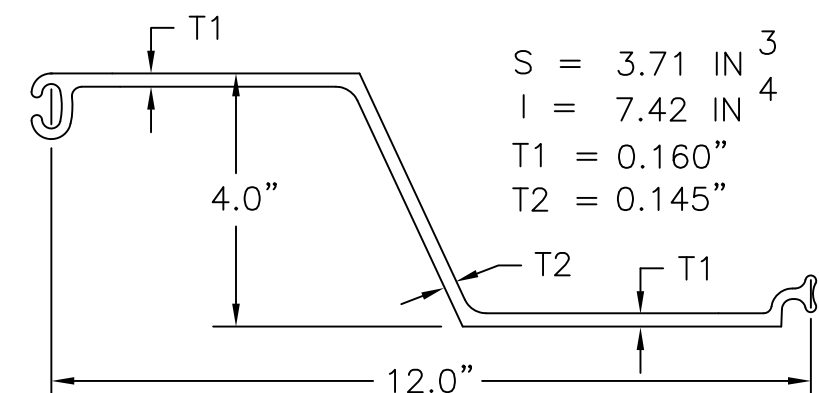


STAKED TURBIDITY BARRIER

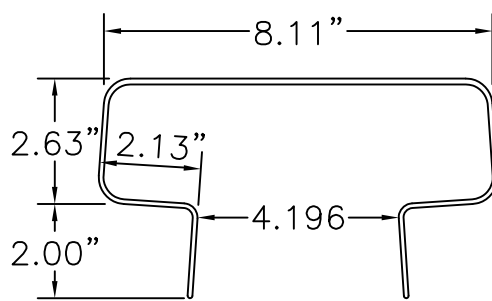


INDEX No. 102 - TYPE III SILT FENCE
 SCALE 1" = 2'

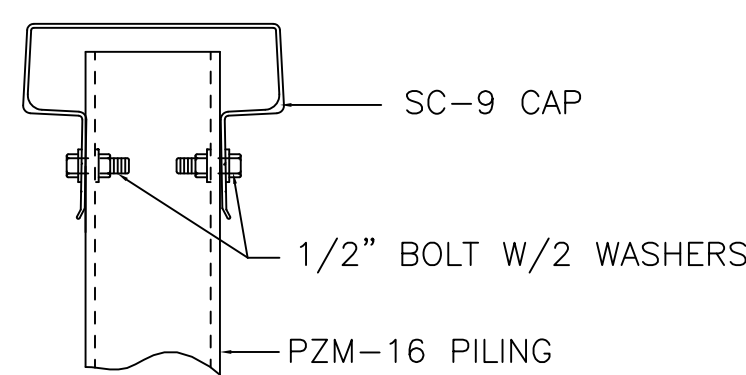
INDEX No. 103 - TURBIDITY BARRIERS
 NOT TO SCALE



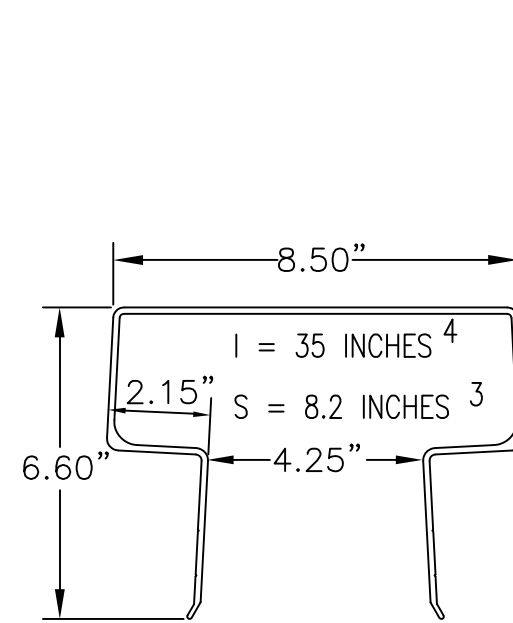
SHEETING SECTION PZM-16



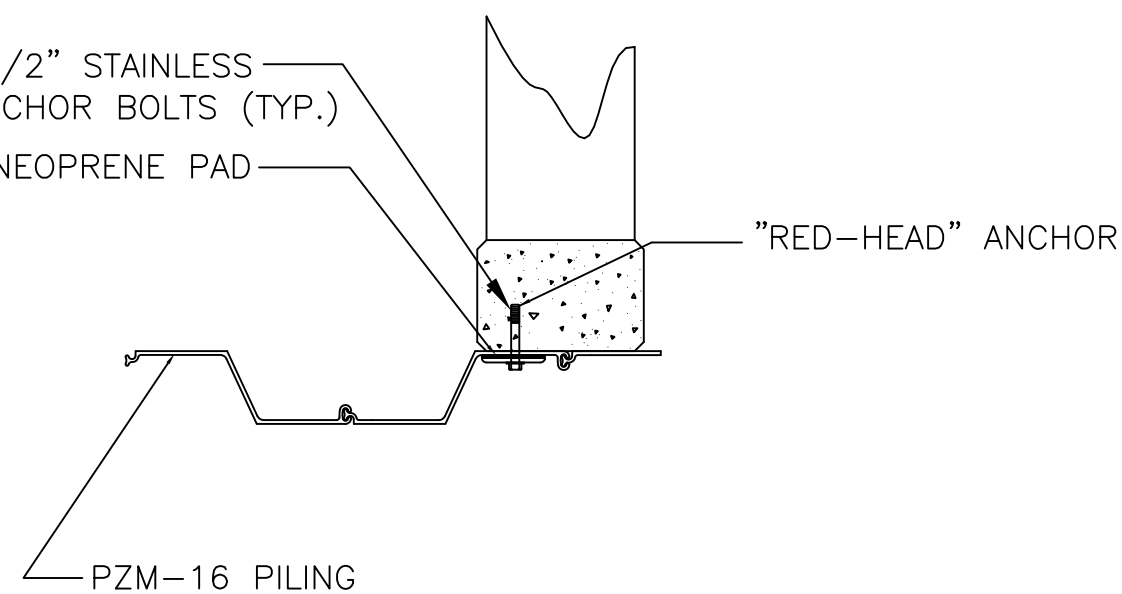
CAP INSERT MEDIUM SC-10



SC-9 CAP DETAIL



CAP SECTION SC-9



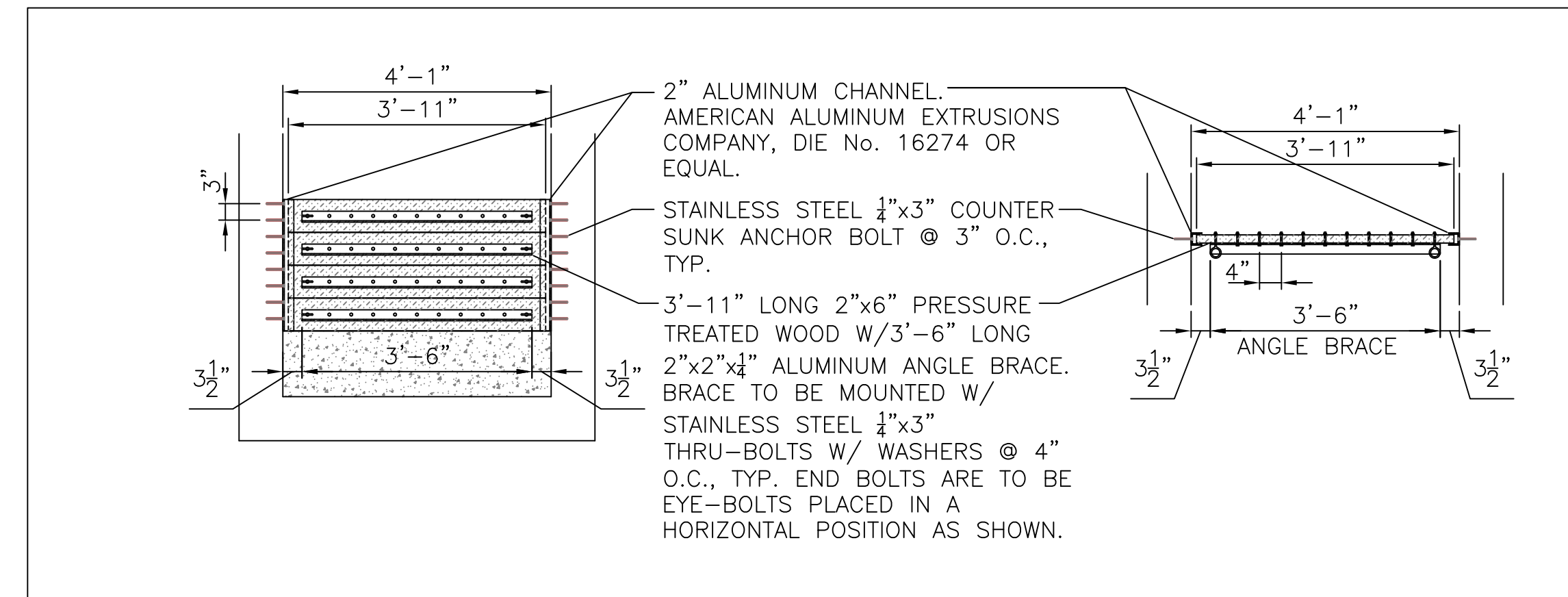
WALL CONNECTION DETAIL

NOTES

- EVERY OTHER PILE WILL RECEIVE A BOLT ON FRONT FACE.
- EVERY OTHER PILE WILL RECEIVE A BOLT ON BACK FACE.
- BOLTS SHOULD BE SPACED ON EITHER SIDE OF THE INSERT TO PREVENT MOVEMENT OF THE INSERT.
- ALL BOLTS, NUTS AND WASHERS ARE STAINLESS STEEL.
- TIE RODS ARE NOT RECOMMENDED TO BE USED WITH THIS CAP.
- SHEETS TO BE INSTALLED WITH A VIBRAL DRIVER.

(INSTALLATION TO BE DONE TO MANUFACTURER'S SPECIFICATIONS)

INDEX No. 104 - [SHORE-ALL (R)] ALUMINUM SHEET PILE WALL DETAIL
 N.T.S.



INDEX No. 105 - ADJUSTABLE WEIR DETAIL
 N.T.S.

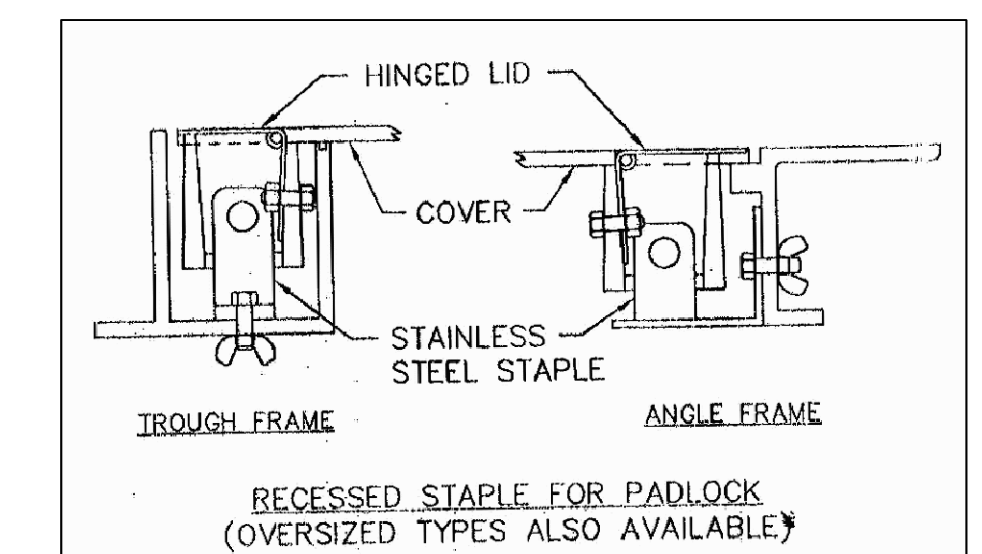
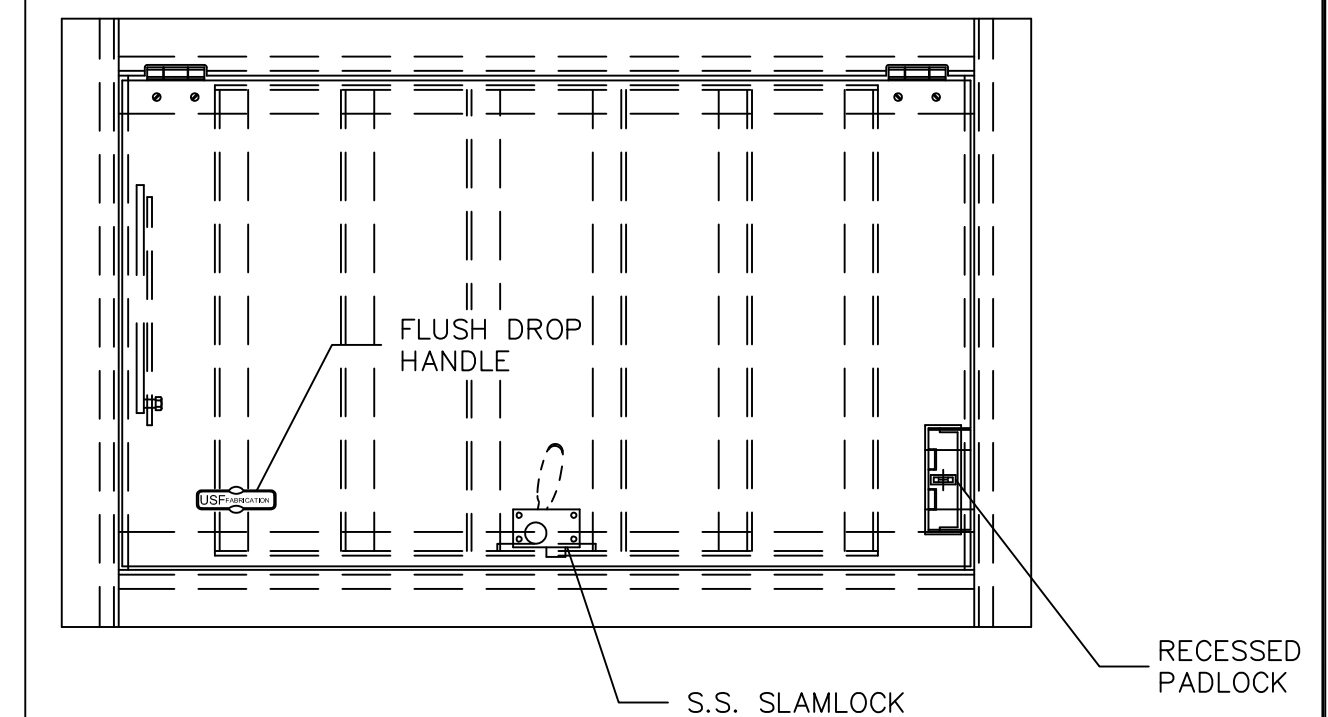
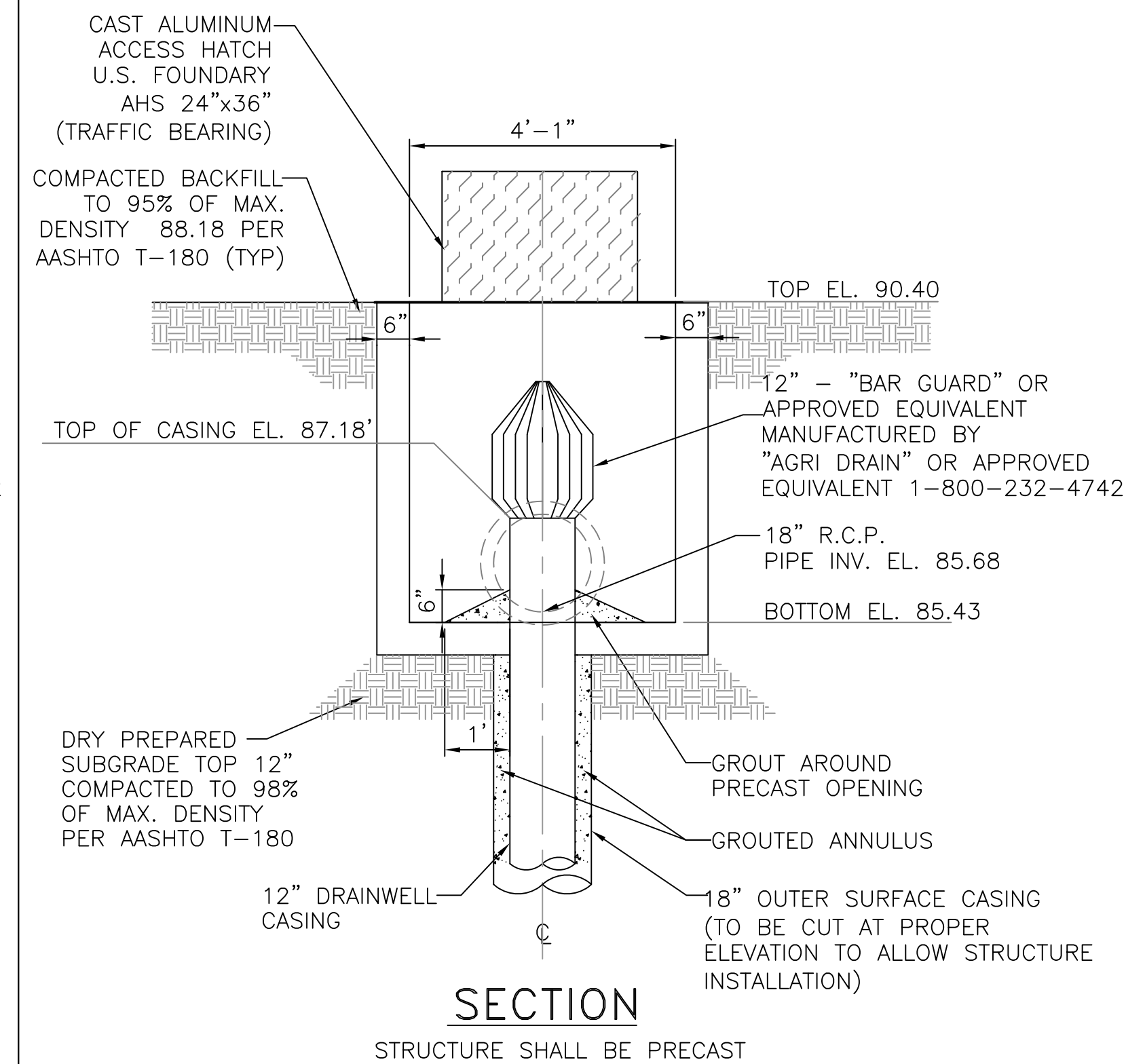
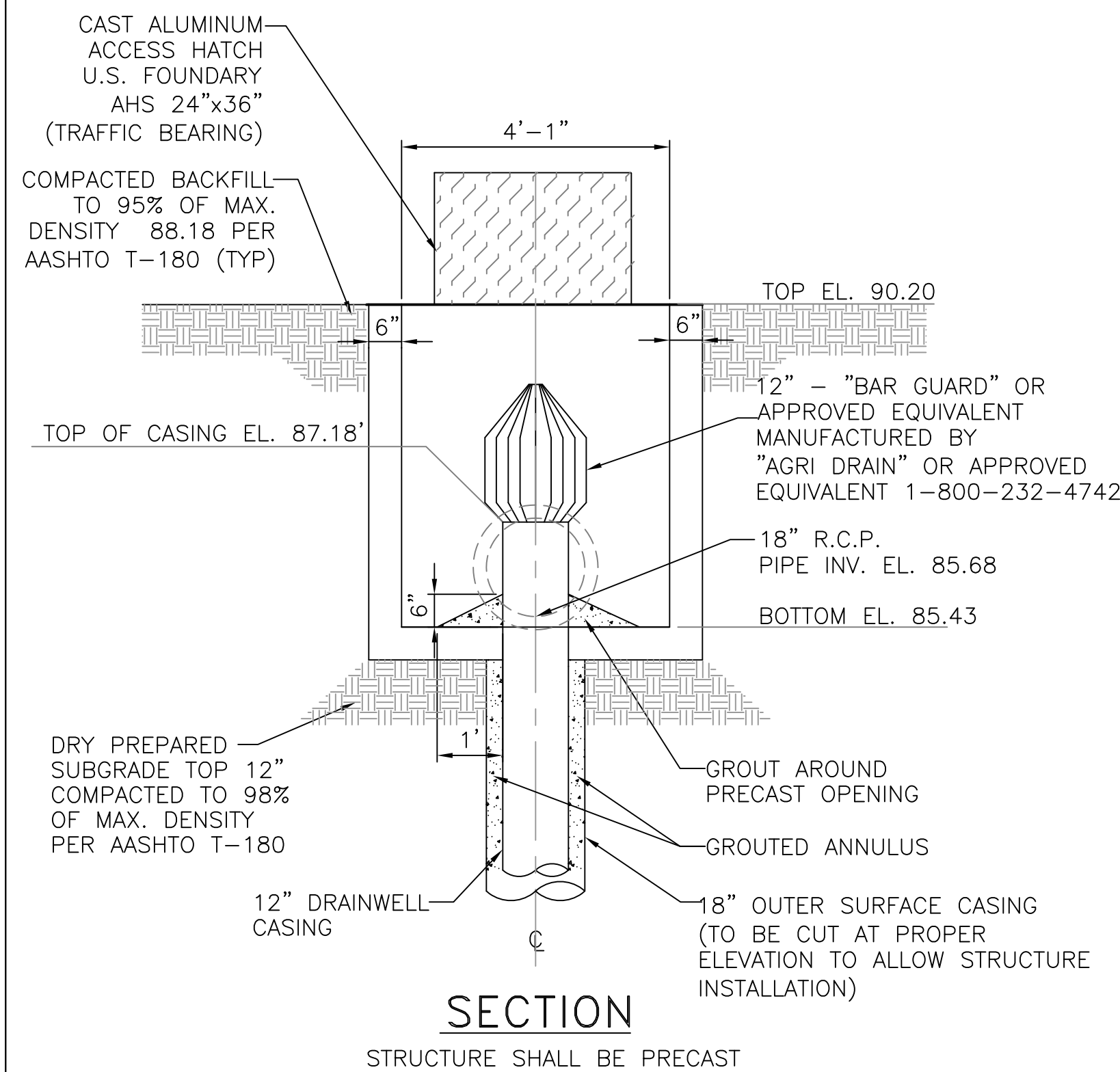
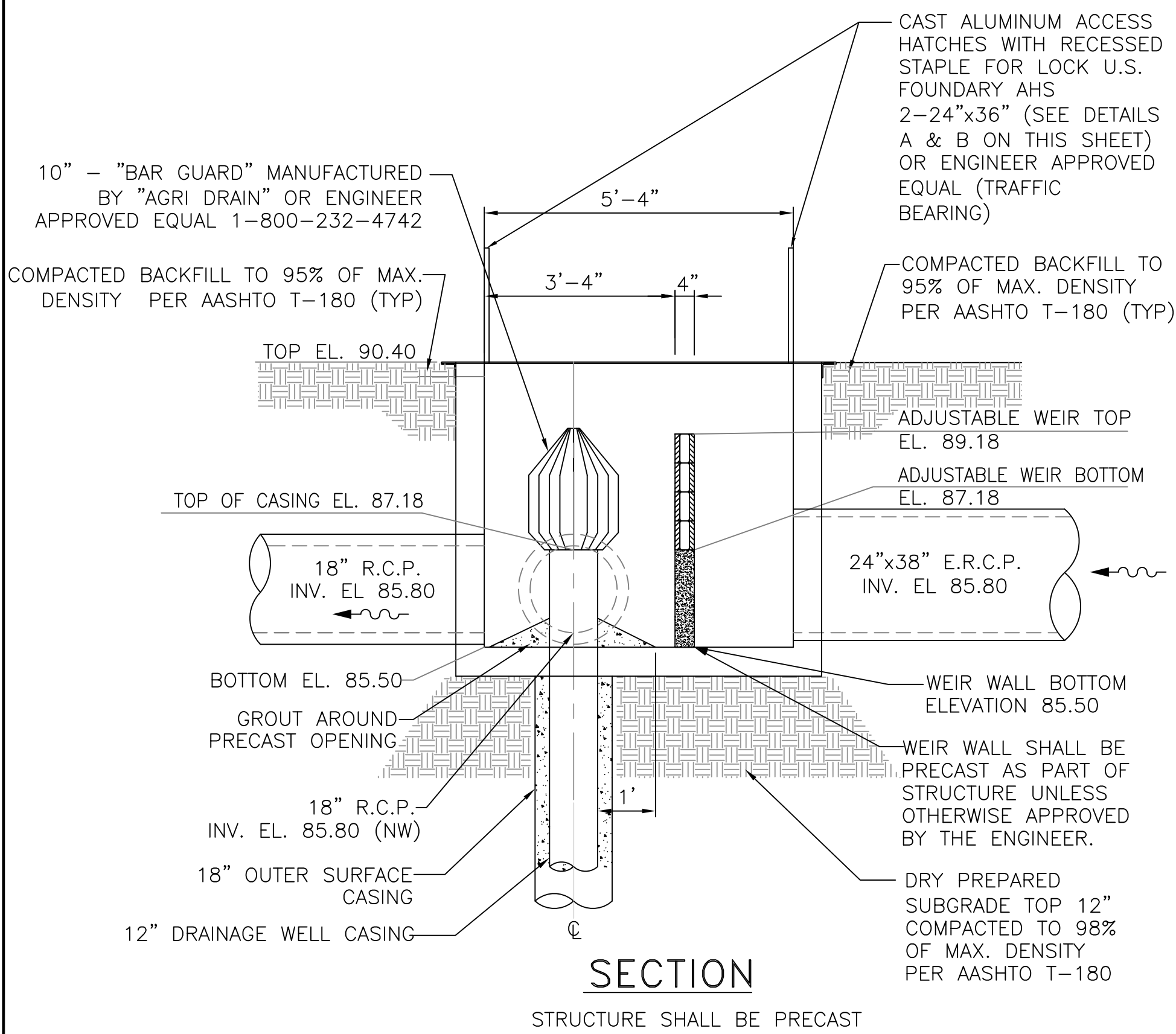
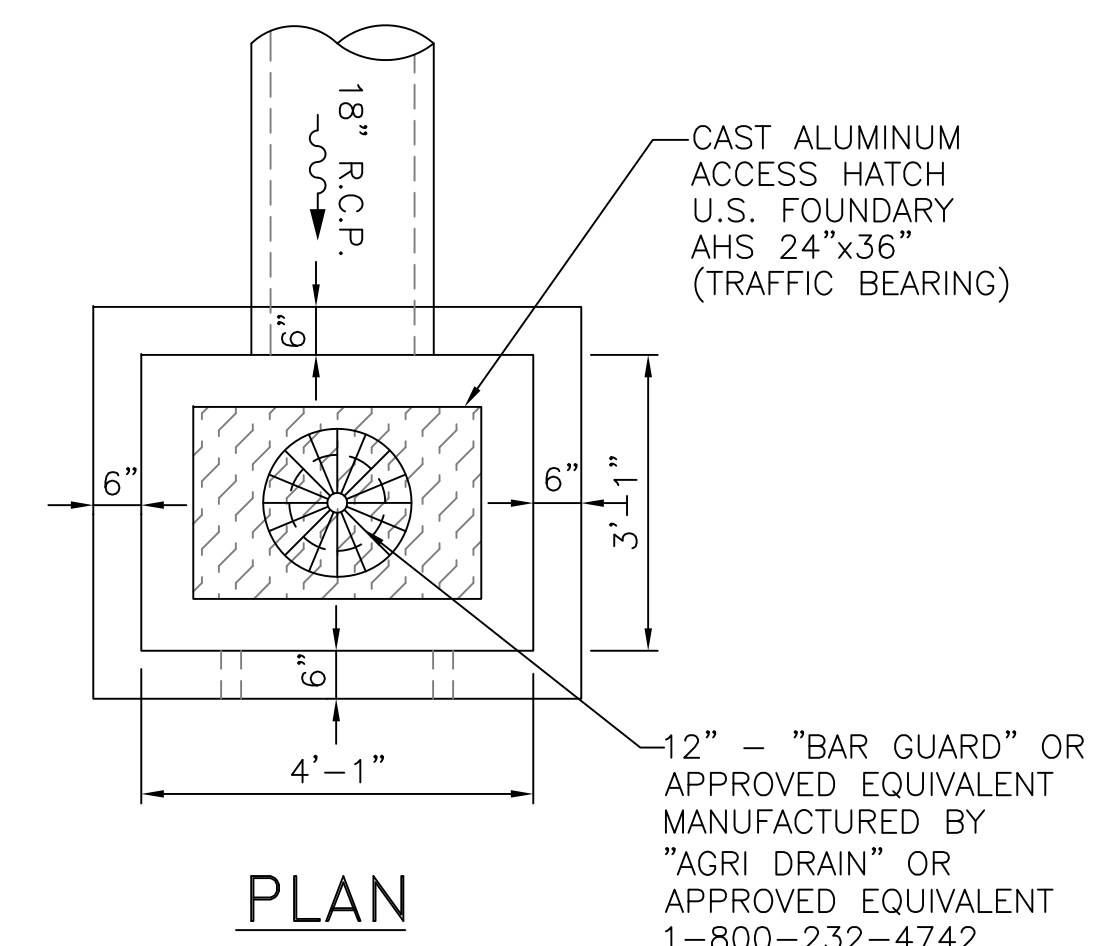
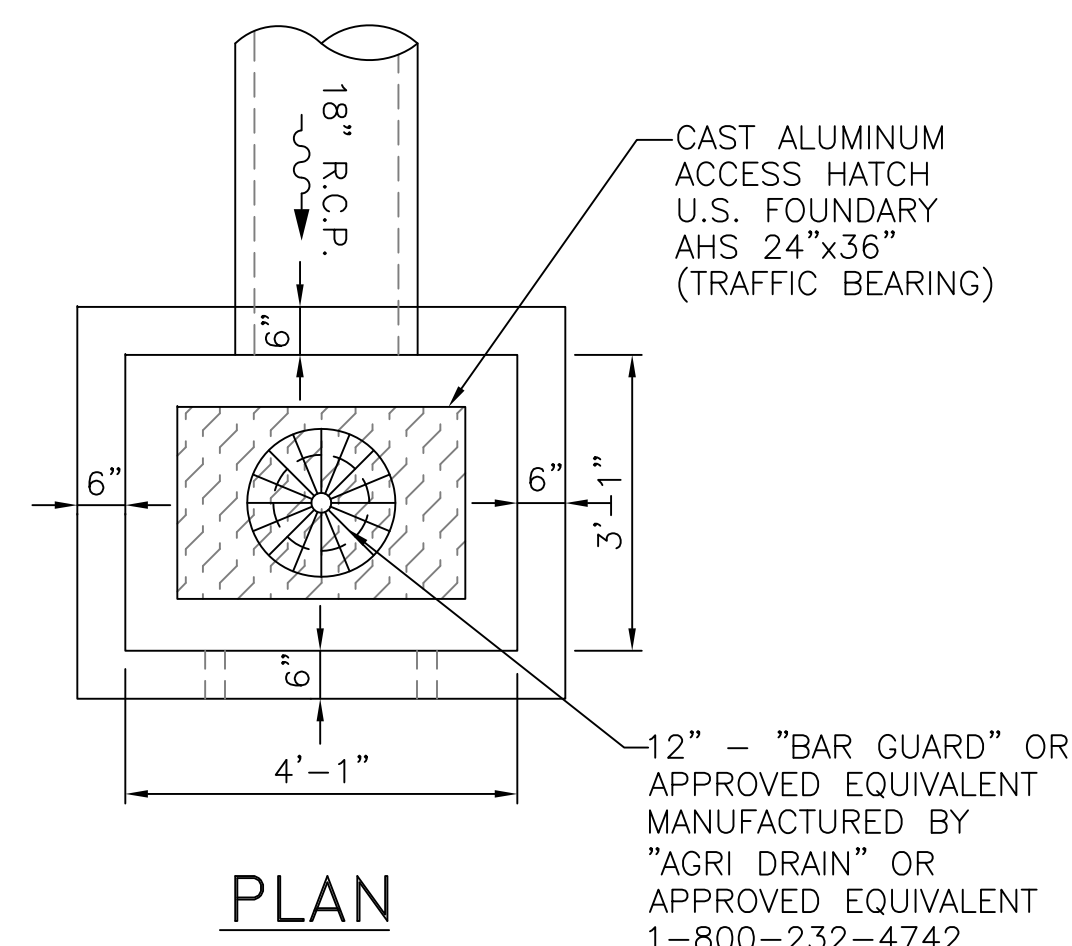
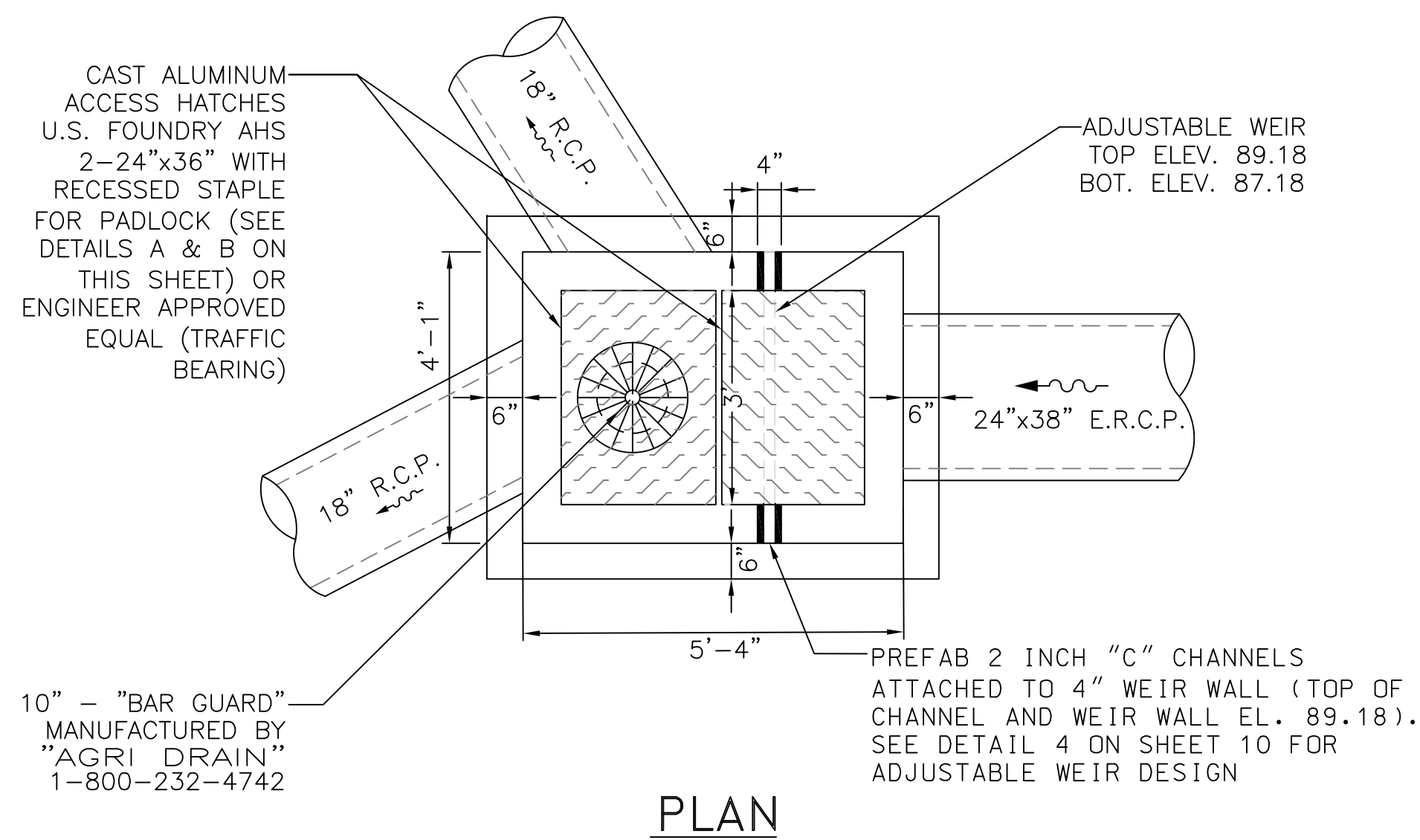
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK				
DATE	REVISIONS	BY	CHECKED	

LITTLE LAKE FAIRVIEW DW-039
 AND LAKE FAIR DW-032
 DRAINAGE WELL REPLACEMENT
 ORANGE COUNTY, FLORIDA



MISCELLANEOUS SITE DETAILS			
DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
SJS	VP	SJS/DS	DS

PROJECT NO.	13-092
SCALE	N.T.S.
DATE	FEBRUARY 2014
SHEET NO.	10
SHEET	10 OF 12



NOTE:
ONLY RECESSED STAPLE FOR PADLOCK WILL BE ACCEPTED

1
11 DW-039A- 4'-1"x5'-4" F.D.O.T. MODIFIED TYPE "J" REPLACEMENT DRAINAGE WELL STRUCTURE DETAIL NOT TO SCALE

2
11 DW-039B SECTION CASING REPLACEMENT DRAINWELL STRUCTURE DETAIL NOT TO SCALE

3
11 DW-032 SECTION CASING REPLACEMENT DRAINWELL STRUCTURE DETAIL NOT TO SCALE

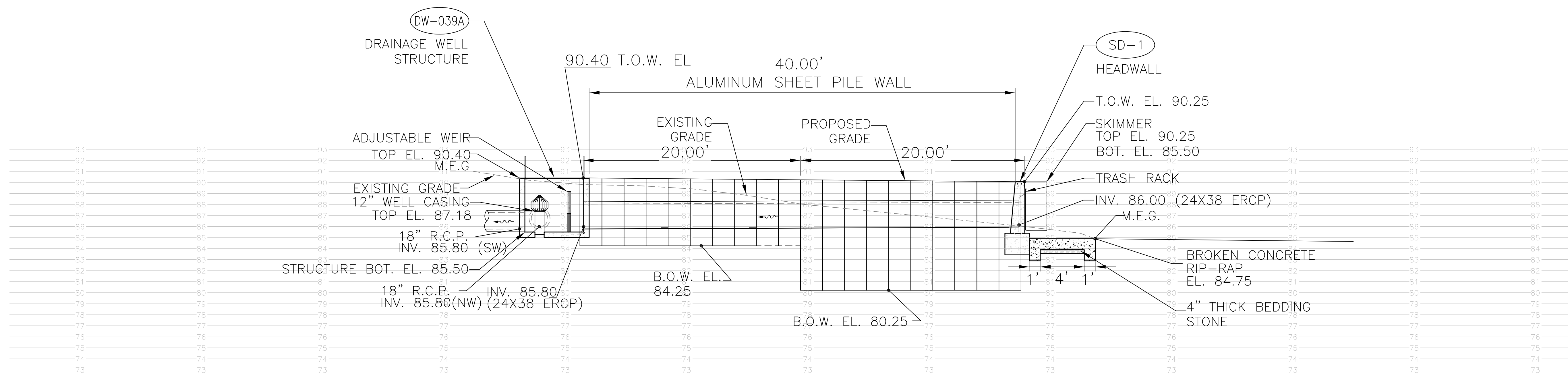
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK					
DATE	REVISIONS	BY	CHECKED		

LITTLE LAKE FAIRVIEW DW-039 AND LAKE FAIR DW-032 DRAINAGE WELL REPLACEMENT ORANGE COUNTY, FLORIDA

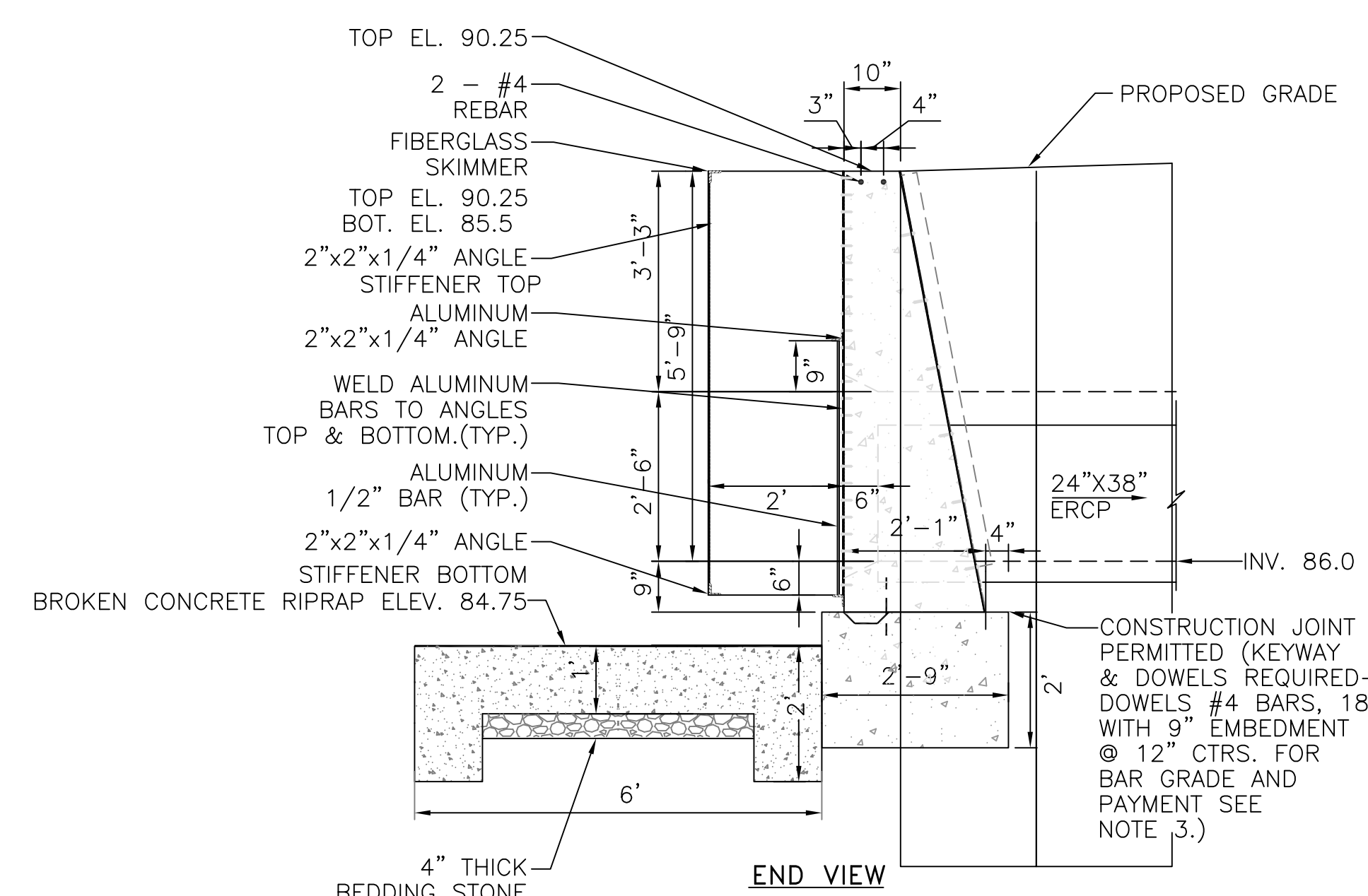
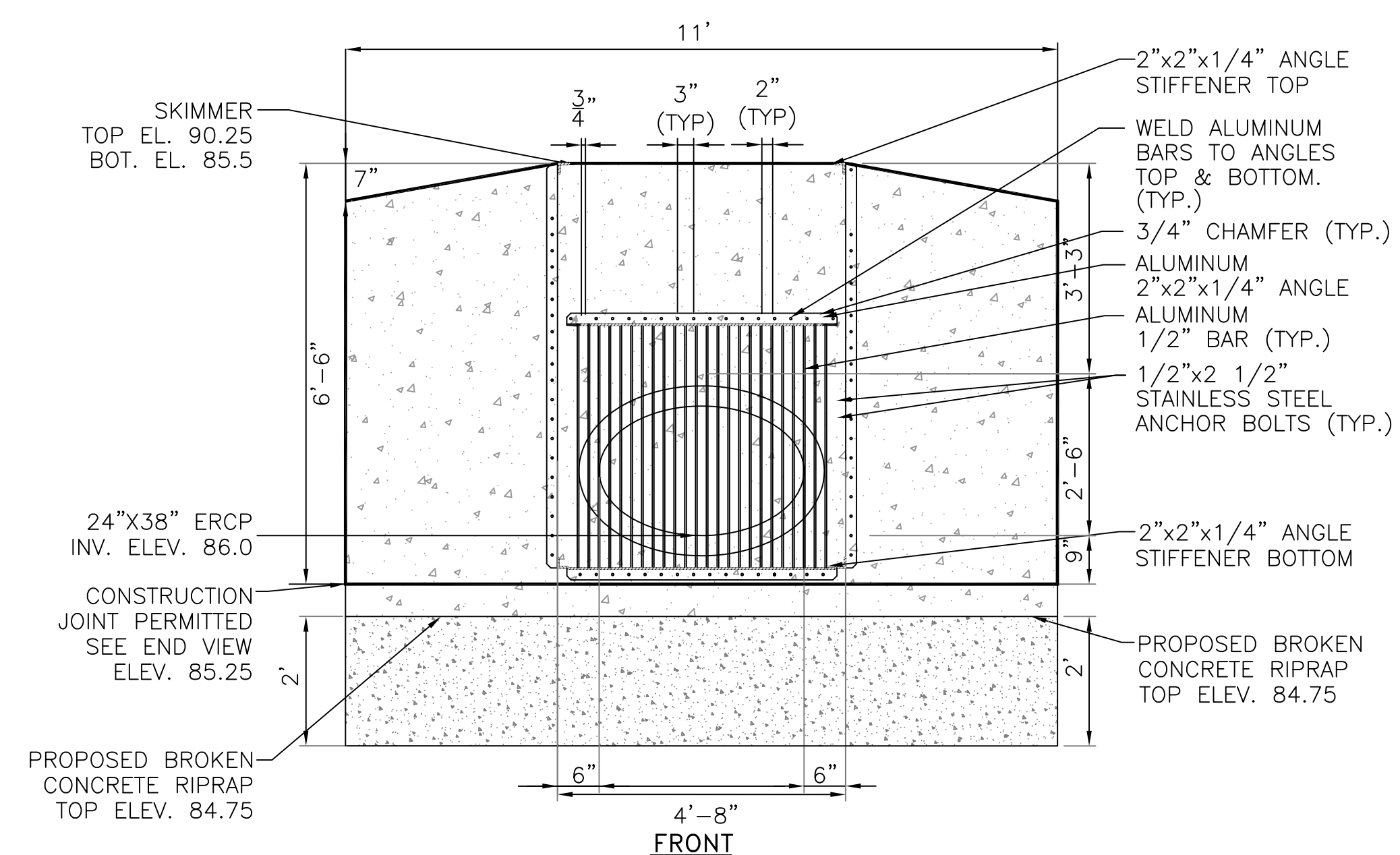


DRAINAGE WELLS DETAILS				PROJECT NO. 13-092
DESIGNED BY SJS	DRAWN BY E.R	CHECKED BY SJS/DS	APPROVED BY DS	SCALE N.T.S
				DATE FEBRUARY 2014
				SHEET NO. 11
				SHEET 11 OF 12
				100% SUBMITTAL - FOR CONSTRUCTION

DEVO SEEREERAM, Ph.D., P.E. REGISTRATION NO. 48303 13-092 PLANS.dwg



1 SECTION A-A
12 NOT TO SCALE



GENERAL NOTES

1. ENDWALL LOCATIONS & POSITIONS ARE FOR ROUND CONCRETE PIPE.
2. FRONT SLOPE & DITCH TRANSITIONS SHALL BE IN ACCORDANCE WITH INDEX No. 280.
3. ENDWALLS SHALL BE PRECAST CONCRETE. REINFORCING STEEL SHALL BE GRADES 40 OR 60. ADDITIONAL REINFORCEMENT NECESSARY FOR HANDLING PRECAST UNITS SHALL BE DETERMINED BY THE CONTRACTOR OR THE SUPPLIER. COST OF REINFORCEMENT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR CONCRETE, (ENDWALLS).
4. ALL EXPOSED CORNERS AND EDGES OF CONCRETE ARE TO BE CHAMFERED 3/4".
5. CONCRETE MEETING THE REQUIREMENTS OF ASTM C-478 (4000 PSI) MAY BE USED IN LIEU OF CLASS I CONCRETE IN PRECAST ITEMS MANUFACTURED IN PLANTS WHICH ARE UNDER THE STANDARD OPERATING PROCEDURES FOR THE INSPECTION OF PRECAST PRODUCTS.
6. ON OUTFALL DITCHES WITH SIDE SLOPES FLATTER THAN 1 1/2 : 1, PROVIDE 20' TRANSITIONS FROM THE ENDWALL TO THE FLATTER SIDE SLOPES, RIGHT-OF-WAY PERMITTING.
7. FOR SODDING AROUND ENDWALLS SEE INDEX No. 281.
8. ANCHOR BOLTS SHALL BE 304 STAINLESS STEEL WITH A MINIMUM OF 2" EMBEDMENT INTO CONCRETE. BOLT SHALL BE KWIK BOLT II BY HILTI OR EQUAL.

2 SD-1 MODIFIED F.D.O.T. HEADWALL DETAIL PER INDEX No. 250
12 NOT TO SCALE

NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK			
DATE	REVISIONS	BY	CHECKED

LITTLE LAKE FAIRVIEW DW-039
AND LAKE FAIR DW-032
DRAINAGE WELL REPLACEMENT
ORANGE COUNTY, FLORIDA



SECTIONS & DETAILS			
DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
SJS	E.R	SJS/DS	DS

PROJECT NO.	13-092
SCALE	AS SHOWN
DATE	FEBRUARY 2014
SHEET NO.	12
SHEET	12 OF 12