



OF INLET MAY BE SUBSTITUTED FOR FILTER CLOTH

INLET DEBRIS CONTROL SCREEN N.T.S.

EROSION CONTROL NOTES:

TO PREVENT SEDIMENTARY RUNOFF DURING CONSTRUCTION, STAKED HAYBALES, STAKED SILT SCREENS OR INLET DEBRIS CONTROL SCREENS ARE TO BE PLACED AT STORM INLETS, OUTFALL LOCATIONS AND ADJACENT PROPERTY LINES AS REQUIRED PRIOR TO ANY CONSTRUCTION ACTIVITIES.

SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSTALLED AND THEN VERIFIED/INSPECTED MANATEE COUNTY NATURAL RESOURCES DEPARTMENT PRIOR TO COMMENCEMENT OF CONSTRUCTION.

THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE SEDIMENTATION BARRIERS IN A WORKING MANNER FOR THE DURATION OF CONSTRUCTION AND SHOULD BE CHECKED DAILY. SILTATION ACCUMULATIONS GREATER THAN THE LESSER OF 12 INCHES OR ONE-HALF OF THE DEPTH OF THE SEDIMENTATION BARRIER SHALL BE IMMEDIATELY REMOVED AND REPLACED IN UPLAND AREAS. IN ADDITION TO SPECIFIED EROSION CONTROL LOCATIONS, THE CONTRACTOR SHALL PERFORM DAILY SITE INSPECTIONS FOR POTENTIAL EROSION PROBLEMS. IF PROBLEMS OCCUR, THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING APPROPRIATE EROSION CONTROL IMMEDIATELY. STORMWATER TREATMENT FACILITIES INCLUDING OUTFALL PER DETAIL ARE TO BE CONSTRUCTED EARLY IN SITE DEVELOPMENT, WITH NO OFF-SITE UNTREATED RUN-OFF OCCURRING DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING TEMPORARY EROSION CONTROL DEVICES FOLLOWING COMPLETION OF ALL CONSTRUCTION AND FINAL STABILIZATION.

- CONTRACTOR TO KEEP CONSTRUCTION ACTIVITIES AND EQUIPMENT TO A MINIMUM AT OUTFALL LOCATIONS WHICH DISCHARGE TO EXISTING JURISDICTIONAL AREAS. FLOATING OR STAKED TURBIDITY BARRIERS MAY BE USED IN LIEU OF STAKED HAYBALES/SILT SCREENS WHERE WARRANTED.
- ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED IN-PLACE UNTIL THE SITE HAS BEEN STABILIZED AND REVEGETATED.
- CONSTRUCTION METHOD AND MATERIALS TO BE IN ACCORDANCE WITH SECTION 104-6 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD CONSTRUCTION SPECIFICATIONS.
- a) HAY BALES MUST BE BUTTED CLOSE TOGETHER AND HAVE NO GAPS TO ALLOW FLOW TO PASS THROUGH WITHOUT BEING FILTERED.
- b) JOINTS OF THE FILTER FABRIC MUST BE OVERLAPPED AND PROPERLY CONNECTED TO PREVENT ANY OPENING FROM OCCURRING.



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<u>LEGEND</u> EX. ASPHALT TO BE REMOVED --------------------------------EX. SANITARY — — D — EX. STORM — — W — EX. WATER ----- FM ----- EX. FORCEMAIN

- SEWER LINE
- SEWER LINE
- MAIN

EX. SPOT ELEVATIONS



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BEST MANAGEMENT PRACTICES





SCHENKELSHULTZ □ □ □ ARCHITECTURE □ □ □ 677 North Washington Blvd. Sarasota, FL 34236 voice 941-952-5875 fax 941-957-3630 schenkelshultz.com SS Lic No - AA-C000937 CONFIDENTIAL COPYRIGHT 2009 SCHENKEL & SHULTZ INC. SEE WWW.SCHENKELSHULTZ.COM/COPYRIGHT FOR POLICY AND INFORMATION PURSUANT TO SECTION 102 OF THE COPYRIGHT ACT, 17 U.S.C., ALL CONCEPTS, IDEAS, DESIGNS, ARRANGEMENTS, DRAWINGS, AND PLANS INDICATED OR REPRESENTED BY THIS DOCUMENT ARE COPYRIGHTED BY SCHENKEL & SHU DRAWINGS, AND FLAIS INDICATED OR REPRESENTED BY THIS DOCUMENT ARE COPYRIGHTED BY SCHEMEL & SHLL) INCL AS SUCH LCONCEPTS IDEAS, DESIGNA, RANNERUENTS, DAMINGS, AND FLAIS INDICATED OR REPRESENT THIS DOCUMENT ARE OWNED BY AND THE PROPERTY OF SCHEMELISHIZT AND UMBE CREATED, ELCLIED AND DEVELOPED FOR IT'S OWNI USE. NONE OF THE DEAS, DESIGNA, ARRAINGEMENTS, DR FLAIS SHLL BE LISED BY OR DISLOSED TO ANY PERSON, ARCHITECTURAL OR ENGINEERING PRAC, DONSTRUCTION FRA, SUBCONTRO/TION FRAN, SUPPLIER, OR CORFORATION FOR ANY PURPOSE WHATSCEVER WITHOUT THE WRITTEN PERMISSION OF SCHEMEL & SHLLTZ.IND. UNISULATION SECTION 102 OF THE COPYRIGHT ACT, 17 U.S.C., PROTECTION FOR AN ARCHITECTURAL. WORK CREATED AS A WORK MADE FOR HIRE ON OR AFTER DECEMBER 1, 1980, LASTS FOR 35 YEARS FORM THE DATE OF PUBLICATION OF THE WORK OR FOR YOU SYEARS FORM THE DATE OF CREATION OF THE UMPLIANED PLANS, WHORKEVER TERM IS LESS. WORK OR FOR 120 YEARS FROM THE DATE OF CREATION OF THE UNPUBLISHED PLANS, WHICHEVER TERM IS LESS. WARNING: REPORTOUTION HEREIGE IS A CRIMINAL OFFENSE UNDER SECTION 120 OF THE COPHIGHT A CT, 17 U.S.C; 18 U.S.C; SEC, SEC, UNAUTHORIZED DISCLOSURE MAY CONSTITUTE TRADE SECRET IMARPROPRIATION IN VIOLATION OF LC24-23-11 ET SEC, JANO OTHER LINKS: THE CONCEPTS, IDEAS, DESIGNER, ARRANGENETS, DRANNES, AND FLANS DISCLOSED ARE COPYRIGHTE AND HEREIN MAY BE FATENTED OR RE THE SIBLECT OF PENDING PATTERT APPLICATION ANYONE VIOLATION OF THE INTERVO FTHIS COPYRIGHT PROTECTION WILL BE PROSECUTED TO THE FULL EXTENT OF THE FEDERAL STATE AND LOCAL LINK. FEDERUG IS AN E-MULCUAEL LAWIS. WRITTEN DIAMSKONG ON THESE DOCUMENTS SHALL HAVE PRECEDENCE OVER SCALE DIMENSIONS. CONTRACTORS SHALL VERFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE LOG AND THIS OFFICE MUST BE NOTIFIED OF ANY VARIATION FROM THE DIMENSIONS AND CONDITIONS SOMN BY THESE DRAWINGS SHOP DRAWINGS AND OR DOCTALS. MUST BE SUBMITTED TO THIS OFFICE OR REVIEW BEFORE DROCEEDING WITH FASIRCATION.



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DEMOLITION & EXISTING **CONDITIONS PLAN**



DRAINAGE AND GRADING NOTES

- ALL CONSTRUCTION IS TO BE STAKED IN THE FIELD BY OR UNDER THE SUPERVISION OF A FLORIDA REGISTERED LAND SURVEYOR.
- 2. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL STRUCTURES PRIOR TO
- 3. REFER TO GRADING DETAIL SHEETS FOR CROSS SECTION DETAILS.

INSTALLATIONS.

- 4. REFER TO CONSTRUCTION TECHNICAL SPECIFICATIONS FOR COMPACTION REQUIREMENTS, GRASSING/SODDING REQUIREMENTS, AND PAVING CONSTRUCTION MATERIAL SPECIFICATIONS.
- ALL FILL AREAS ARE TO BE CONSTRUCTED IN 12" MAXIMUM LIFTS.
 ON SLOPES GREATER THAN 3:1 PEGGING OR PINNING OF SOD MAY BE REQUIRED.
- 7. UNLESS OTHERWISE NOTED OR SHOWN ON PLANS ALL SUBGRADE, BASE AND PAVING SHALL COMPLY WITH FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST VERSION). ALL SECTIONS APPLY, SPECIFICALLY STABILIZING (SECTION 160) & BITUMINOUS TREATMENT SURFACE COURSES AND CONCRETE PAVEMENT (SECTIONS 300, 320, 327, 330 & 334) SHOULD BE REVIEWED PRIOR TO BIDDING. IN ALL SECTIONS "DEPARTMENT" WOULD REFER TO MANATEE COUNTY.
- 8. MINIMUM DEPTH OF ASPHALT OVERLAY IS 3/2 INCH, MILL EXISTING ASPHALT AS NECESSARY. REFER TO EXISTING CONDITION (SHEET C2) AND ENGINEERING PLAN (SHEET C3) FOR EXISTING VS. PROPOSED GRADE (DEPTH OF PROPOSED PAVEMENT) COMPARISONS. GENERAL CONSTRUCTION NOTES
- ALL PROPOSED CONSTRUCTION IS TO MEET OR EXCEED LATEST APPLICABLE MANATEE COUNTY PUBLIC WORKS UTILITY STANDARDS AND IS TO MEET ENGINEER'S SPECIFICATIONS.
- THE CONTRACTOR IS TO COORDINATE THE LOCATION AND ELEVATION OF ALL FP&L, GTE AND IRRIGATION SERVICE SLEEVES WITH RESPECTIVE AGENCY PRIOR TO CONSTRUCTION.
- LIMITS OF 3. ALL PROPOSED ELECTRICAL AND COMMUNICATION SERVICES ARE TO BE LOCATED UNDERGROUND AS DIRECTED BY RESPECTIVE AGENCY.
 - CURBING AT SIDEWALK INTERSECTIONS TO BE RECESSED FOR PEDESTRIAN RAMPS. RAMPS TO BE CONSTRUCTED AT TIME OF CURB RADII.
 - 5. CONTRACTOR TO OBTAIN APPLICABLE PERMITS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
 - 6. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION AND ISSUANCE OF ALL COMMENCEMENT AND/OR PROGRESS NOTICES TO GOVERNMENTAL AGENCIES DURING THE COURSE OF CONSTRUCTION, AS REQUIRED FOR INSPECTION, TESTING AND TRACKING PER APPLICABLE AGENCY PERMIT CONDITIONS.
 - CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND COMPLYING WITH ALL PERMIT CONDITIONS AND STIPULATIONS FOR ALL LOCAL, REGIONAL AND STATE AGENCIES, INCLUDING, BUT NOT LIMITED TO, FINAL SITE PLANS, UTILITIES, DRAINAGE, FUGITIVE PARTICULATES AND EROSION.
 - ALL UTILITIES AND/OR DRAINAGE SHOWN AS EXISTING WERE DERIVED FROM THE BEST AVAILABLE INFORMATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE ACTUAL LOCATION, SIZE, TYPE AND AMOUNT OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR TO NOTIFY SUNSHINE UNDERGROUND FACILITIES NOTIFICATION (1-800-432-4770), MCPWD AND FP&L 48 HOURS MINIMUM PRIOR TO START OF CONSTRUCTION FOR POSSIBLE UTILITY LOCATIONS NOT SHOWN ON PLANS.
 - RIGHT-OF-WAY USE PERMIT TO BE OBTAINED BY THE CONTRACTOR FOR OFF-SITE CONSTRUCTION.
 THE CONTRACTOR IS RESPONSIBLE FOR THE PRODUCTION OF REPRODUCIBLE RECORD DRAWINGS. PRIOR TO SCHEDULING OF ANY UNDERGROUND UTILITY PRESSURE TESTS, CONTRACTOR SHALL HAVE OBTAINED (FROM A PROFESSIONAL SURVEYOR) ALL NECESSARY FIELD DATA REQUIRED FOR THE PRODUCTION OF RECORD DRAWINGS. SAID RECORD DRAWINGS ARE TO MEET THE REQUIREMENTS OF MANATEE COUNTY HEALTH DEPARTMENT, CITY OF BRADENTON, FDEP AND SWFWMD. THE CONTRACTOR SHALL PROCESS SAID DRAWINGS THROUGH MANATEE COUNTY PLANNING, PERMITTING AND INSPECTIONS DEPARTMENT (MCPPI) AND UPON COMPLETION SHALL
 - PROVIDE TWO REPRODUCIBLE MYLARS AND FIVE SETS OF PRINTS OF THE RECORD DRAWINGS, SIGNED AND SEALED BY A PROFESSIONAL LAND SURVEYOR TO THE ENGINEER. THESE RECORD DRAWINGS SHALL BE CERTIFIED TO THE OWNER, APPROPRIATE GOVERNMENTAL AGENCIES, AND ZNS ENGINEERING, L.C. IF CONSTRUCTION STAKEOUT IS PROVIDED BY THE OWNER, THE CONTRACTOR SHALL
 - ACCURATELY RECORD THE LOCATION OF ALL WORK THAT MAY SUBSEQUENTLY BECOME CONCEALED OR INACCESSIBLE, AS WELL AS MARK OR EXPOSE UNDERGROUND FACILITIES AS NECESSARY TO FACILITATE THE PREPARATION OF THE RECORD DRAWINGS BY THE OWNER, AND PROVIDE SAID INFORMATION TO THE OWNER.
 - 1. ALL SIGN POLES ARE TO BE ROUND ALUMINUM POSTS.
 - REFER TO FDOT INDEX 17721 FOR CONDUIT PAVEMENT TRENCH DETAILS ONLY.
 - ALL CONSTRUCTION IS TO BE STAKED IN THE FIELD BY OR UNDER THE SUPERVISION OF A FLORIDA REGISTERED LAND SURVEYOR. RECORD DRAWINGS SHALL BE PROVIDED BY THE SURVEYOR.
 - THE CONTRACTOR IS RESPONSIBLE FOR THE PRODUCTION OF REPRODUCIBLE RECORD DRAWINGS. PRIOR TO SCHEDULING OF ANY UNDERGROUND UTILITY PRESSURE TESTS, CONTRACTOR SHALL HAVE OBTAINED (FROM A PROFESSIONAL SURVEYOR) ALL NECESSARY FIELD DATA REQUIRED FOR THE PRODUCTION OF RECORD DRAWINGS. SAID RECORD DRAWINGS ARE TO MEET THE REQUIREMENTS OF MANATEE COUNTY HEALTH DEPARTMENT & MANATEE COUNTY PUBLIC WORKS UTILITY STANDARDS AND FDEP. THE CONTRACTOR SHALL PROVIDE TWO REPRODUCIBLE MYLARS AND FIVE SETS OF PRINTS OF THE RECORD DRAWINGS, SIGNED AND SEALED BY A PROFESSIONAL LAND SURVEYOR TO THE ENGINEER. THESE RECORD DRAWINGS SHALL BE CERTIFIED TO THE OWNER, APPROPRIATE GOVERNMENTAL AGENCIES, AND ZNS ENGINEERING,
 - IF CONSTRUCTION STAKEOUT IS PROVIDED BY THE OWNER, THE CONTRACTOR SHALL ACCURATELY RECORD THE LOCATION OF ALL WORK THAT MAY SUBSEQUENTLY BECOME CONCEALED OR INACCESSIBLE, AS WELL AS MARK OR EXPOSE UNDERGROUND FACILITIES AS NECESSARY TO FACILITATE THE PREPARATION OF THE RECORD DRAWINGS BY THE OWNER, AND PROVIDE SAID INFORMATION TO THE OWNER.
 - WATERMAINS ARE TO BE PIGMENTED, COLOR BLUE, DR-18, C-900 OR C-905 PVC. WATER SERVICES, WHERE LOCATED UNDER PAVEMENT, TO BE ENCASED IN ASTM 2241, SDR-21 PVC. MAINTAIN A MINIMUM OF 36" COVER.
 - 4. RECLAIMED WATERMAINS ARE TO BE PIGMENTED, COLOR LAVENDER, DR-18, C-900 OR C-905 PVC. MAINTAIN A MINIMUM OF 36" COVER
 - 5. GRAVITY SANITARY SEWERS ARE TO BE PIGMENTED, COLOR GREEN, SDR 26, PVC AND CONFORMING TO ASTM D-3034. MAINTAIN A MINIMUM OF 36" COVER.
 - 6. F.A.C. 62-555.314 UTILITY SEPARATION STANDARDS WILL BE UTILIZED FOR CONSTRUCTION OF ALL NEW UTILITIES.
 - CONTRACTOR IS RESPONSIBLE FOR ALL GOVERNMENTAL CONSTRUCTION FEES AND CHARGES. I.E. INSPECTIONS AND TESTING FEES. HOWEVER, IMPACT FEES (FIF), IF APPLICABLE, TO BE PAID BY THE OWNER.
 - 8. TOPOGRAPHIC AND PROPERTY SURVEYS GIVING LOT SIZE, GROUND ELEVATIONS, OBSTRUCTIONS ON SITE, LOCATIONS AND DEPTHS OF SEWERS, CONDUITS, PIPES, EXISTING STRUCTURES, CURBS, PAVEMENTS, TRACTS, AND SOIL BORING DATA GIVING THE NATURE OF GROUND AND SUBSURFACE CONDITIONS HAVE BEEN OBTAINED FROM RELIABLE SOURCES. THE ACCURACY OF THIS DATA IS NOT GUARANTEED, AND IS FURNISHED SOLELY AS AN ACCOMMODATION TO THE CONTRACTOR. USE OF THIS DATA SHALL BE MADE AT THE CONTRACTOR'S DISCRETION. NO ADDITIONAL COMPENSATION WILL BE GRANTED DUE TO THE CONTRACTOR'S LACK OF KNOWLEDGE OF SITE CONDITIONS. PRIOR TO BID SUBMISSION, THE CONTRACTOR SHALL
 C CONDUCT ANY ADDITIONAL SURVEYS AND SOILS TESTS NECESSARY TO VERIFY THE ACCURACY OF THE INFORMATION PROVIDED.

. <u>.</u>	PROP. CONC. SIDEWALK	•	PROP. FIRELINE CONNECTION	R	EX. RECLAIM MAIN
	PROP. ASPHALT, BASE & SUBBASE		PROP. FIRELINF BACKFLOW	s	EX. SANITARY SEWER
	PROP. OVERLAY (SEE NOTE		PREVENTOR W/FDC		EX. MANHOLE
	9 OF THE GRADING AND DRAINAGE NOTES THIS SHEET)		PROP. MANHOLE	ě	EX. LIFT STATION
	PROP. SWALE	s	PROP. SANITARY SEWER		EX. BIULDINGS
	PROP. ELEVATIONS	ا م ر _	PROP. SANITARY SEWER CONNECTION	D	EX. DRAINAGE PIPES
-w	PROP. POTABLE WATERMAIN	I	PROP. FIRE HYDRANT		EX. DRAINAGE STRUCTURES
~	PROP. WATERMAIN CONNECTION		PROP. WHEEL STOPS	X	EX. FENCE
. —		þ	PROP. SIGN	UT	EX. UNDERGROUND TELEPHONE
┦┨╝┝	PREVENTON W/METER		PROP. BUILDING	UE	EX. UNDERGROUND ELECTRIC
-R —	PROP. RECLAIM WATERMAIN		PROP. DRAINAGE STRUCTURE	16.10	
⊢	PROP. RECLAIM WATERMAIN	F	EX. FOREC MAIN	16 10	
	CONNECTION		ex. Watermain	(OVERLAY)	MILLING & RESURFACE/ OVERLA
-F —	PROP. FIRELINE			MT EX.	MEET EXISTING GRADE

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ENGINEERING PLAN

N.T.S.

100% Construction Documents

SCHENKELSHULTZ 🗆 🗆 ARCHITECTURE 🗆 🗆 🗆

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DRAINAGE AND **GRADING DETAILS**

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REQUIRED LENGTH OF RESTRAINED JOINT PIPE FOR DR-18 PVC PIPE

	HORIZ. BENDS			TEES				REDUCERS			PLUGS	VALVES	
SIZE	90°	45 °	22.5 °	SIZE LENGTH					SIZE				
24	90	38	18	X24 169	X20 132	X16 90	X12 38	X10 6	X20 64	X16 117	X12 158	214	107
20	78	32	16	X20 141	X16 101	X12 53	X10 24	X8 1	X16	X12 115	X10 149	184	92
16	66	27	13	X16 111	X12 67	X10 41	X8 12		X12 64	X10 107	X8 111	151	76
12	52	22	10	X12 80	X10 56	X8 31	X6 1		X10 58	X8 62	X6 86	118	59
10	44	18	9	X10 63	X8 40	X6 7			X8 33	X6 61	X4 81	100	50
8	37	15	7	X8 49	X6 18	X4 1			X6 35	X4 60		83	42
6	29	12	6	X6 29	X4 1				X4 33			63	32
4	21	8	4	X4 12								45	23

NOTES:

- 1.) RESTRAIN 11.25" BENDS 50% OF LENGTH FOR 22.5" BENDS.
- 2.) ALL VALVES AND FITTINGS SHALL BE RESTRAINED TO THE CONNECTING SECTIONS OF PIPE.
- 3.) ALL ISOLATION VALVES MUST BE PROPERLY ANCHORED OR RESTRAINED TO RESIST A 180 PSI TEST PRESSURE IN EITHER DIRECTION.
- 4.) PIPE SIZES ARE GIVEN IN INCHES.
- 5.) RESTRAINED PIPE LENGTHS ARE GIVEN IN FEET.
- 6.) LENGTHS SHOWN ARE FOR A TEST PRESURE OF 180 PSI.
- 7.) THE RESTRAINED LENGTHS SHOWN IN THESE TABLES ARE BASED ON SOIL CLASSIFICATION SP WITH AWWA TYPE 3 TRENCH CONDITIONS, 180 PSI TEST PRESSURE, 3 FEET OF COVER AND 1.5 FACTOR OF SAFTEY. ACTUAL BURY CONDITIONS MUST BE DETERMINED BY THE ENGINEER OF RECORD AND THE RESTRAINED LENGTHS MODIFIED ACCORDINGLY.
- 8.) SEE RESTRAINED LENGTHS FOR PIPE STD. DETAIL UG-10.

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UTILITY DETAILS

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UTILITY DETAILS

SECTION A-A VERTICAL SCALE: 1" =2' HORIZONTAL SCALE : 1"=20'

SECTION B-B VERTICAL SCALE: 1" =2' HORIZONTAL SCALE : 1"=20'

SECTION G-G VERTICAL SCALE: 1" =2' HORIZONTAL SCALE : 1"=20'

SECTION C-C

HORIZONTAL SCALE : 1 "=20'

VERTICAL SCALE: 1" =2'

SECTION D-D VERTICAL SCALE: 1" =2'

HORIZONTAL SCALE : 1"=20'

SECTION H-H VERTICAL SCALE: 1" =2'

HORIZONTAL SCALE : 1"=20'

SECTION I-I VERTICAL SCALE: 1" =2' HORIZONTAL SCALE : 1"=20' SCHENKELSHULTZ

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CROSS SECTIONS