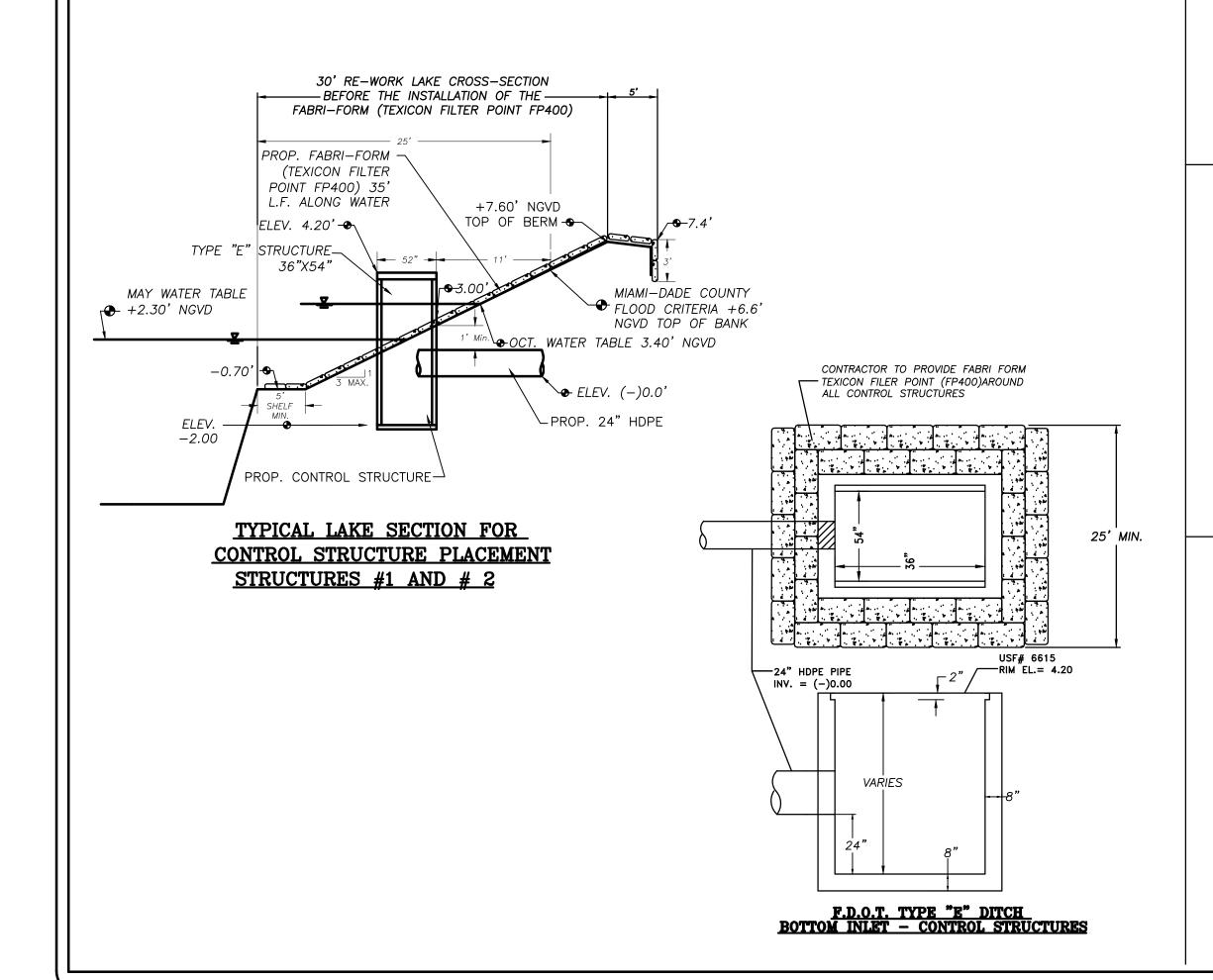
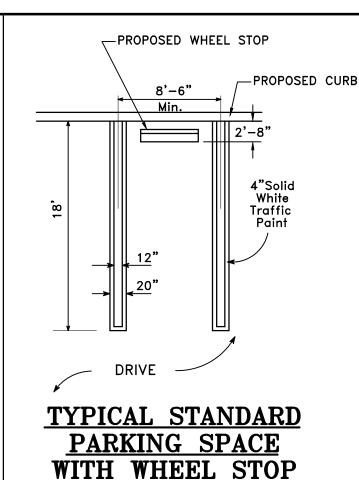


- 1. THE FRENCHDRAIN SKIMMER IS A HOODED COVER, MOUNTED OVER AN OUTLET IN A CATCHBASIN, THAT PREVENTS OIL AND FLOATING DEBRIS FROM EXITING THE BASIN. USE THIS SKIMMER IN FRENCHDRAIN CATCHBASINS AND IN OTHER LOCATIONS WERE THERE IS A NEED TO PREVENT OIL, DEBRIS OR OTHER FLOATING CONTAMINANTS FRON EXITING CATCHBASINS THROUGH OUTLET PIPES
- 2. PLACE NEOPRENE GASKET MATERIAL BETWEEN THE SKIMMER AND THE CATCHBASIN AT ALL POINTS OF CONTACT. TRIM THE GASKET NEATLY TO EXTEND $\frac{1}{2}$ INCH BEYOND THE JOINT.
- 3. SKIMMER BAFFLE, CLEANOUT PIPE AND ANGLES SHALL BE PRIMARILY CONSTRUCTED OF ETHER GALVANIZED STEEL, ALUMINUM, POLYVINYL CHLORIDE, POLYETHYLENE, FIBERGLASS OR ACRYLONITRITE BUTADIENE STYRENE. ALL STEEL COMPONENTS, OTHER THAN STAINLESS, SHALL BE HOT-DIP GALVANIZED.
- 4. MOUNTING HARDWARE, HINGES AND LATCHES SHALL ALL BE STAINLESS STEEL, LOSS PREVENTION DEVICE SHALL BE EITHER STAINLESS STEEL CHAIN OR RIVETED NYLON STRAP.
- 5. MATERIAL USED IN CONSTRUCTION OF SKIMMER BODIES (BAFFLES) AND CLEANOUT PIPE SHALL COMPLY WITH STANDARD SPECIFICATION 943 FOR STEEL 945 FOR ALUMINUM OR 948 FOR PLASTICS.
- 6. ALL COSTS FOR FURNISHING AND INSTALLING A FRENCHDRAIN SKIMMER SHALL BE INCLUDED IN THE COST OF THE BASIN IN WHICH IT IS INSTALLED RETROFIT SKIMMERS SHALL BE PAID FOR AS 'MODIFY EXISTING STRUCTURE'.
- 7. PLASTIC SKIMMERS SHALL CONTAIN A MINIMUM OF 1.5% BY WEIGHT OF CARBON BLACK FOR UV PROTECTION.

F-DOT TYPE II SKIMMER



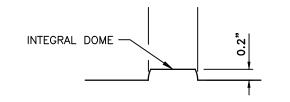


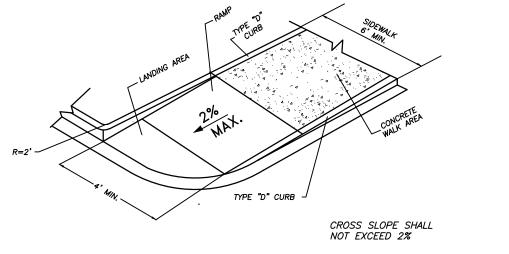
MISCELLANEOUS NOTES:

- 1. ALL STORM DRAINAGE STRUCTURES SHALL BE EQUIPPED WITH FILTER CLOTH SUPPORTED BELOW THE GRATE/INLET
 WITH WIRE MESH OR A SIMILAR SYSTEM UPON INSTALLATION OF THE BASIN TOPS ON SITE. THE FILTER CLOTH FABRIC IS NOT
 TO BE REMOVED OR PERFORATED/DISTURBED FROM THE BASINS UNTIL LANDSCAPING, SOD INSTALLATION, PAVEMENT/CURBING
 INSTALLATION, STRIPING, AND SWEEPING IS COMPLETED ON THE ENTIRE SITE.
- 2. ALL STRUCTURES SHALL BE VACUUMED CLEAN OF ALL SILT, SAND, AND DEBRIS BEFORE FINAL ACCEPTANCE BY THE ENGINEER AND THE OWNER.
- 3. ALL STORM DRAINAGE PIPE (PERFORATED OR NON-PERFORATED) WILL BE INSTALLED AND MAINTAINED CLEAN AND CLEAR OF DEBRIS, ROCK, SAND AND SILT.
- 4. CONTRACTOR(S) SHALL BE CAUTIONED THAT INTRODUCTION OF SUCH MATERIALS AS CONSTRUCTION MATERIALS, CONCRETE AND STUCCO SLURRY OR WASHOFF MATERIALS FROM THESE OPERATIONS, PAINT AND PAINTING ACTIVITY INGREDIENTS, OILS, HYDRAULIC FLUIDS, FUELS AND OR ANY OTHER SUCH DELETERIOUS MATERIALS, WHEN INTRODUCED INTO THE STORM DRAINAGE SYSTEM CAN AND WILL RENDER IT USELESS, POLLUTE THE SITE AND SURROUNDING SITES OR HARM THE SYSTEM'S PERFORMANCE LEVEL.

NOTES:

- 1. ALL ELEVATIONS REFER TO N.G.V.D..
- 2. ALL WORK SHALL CONFORM TO THE DEPARTMENT OF ENVIRONMENTAL RESOURCES MANAGEMENT, SOUTH FLORIDA WATER MANAGEMENT DISTRICT AND MIAMI-DADE COUNTY PUBLIC WORKS DEPARTMENT REGULATIONS & STANDARDS.
- 3. C.A.P.= CORRUGATED ALUMINIUM PIPE AND SHALL MEET FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AS SET FORTH IN SECTIONS 945, 430 AND 440.
- 4. PRIOR TO EXCAVATION THE CONTRACTOR SHALL
 VERIFY THE LOCATION (VERTICALLY & HORIZONTALLY) OF ALL
 OF THE EXISTING UTILITIES IN ORDER TO
 AVOID CONFLICTS WITH THE PROPOSED DRAINAGE.
 IN CASE OF CONFLICT THE CONTRACTOR SHALL
 NOTIFY THE ENGINEER.
- 5. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL DRAINAGE STRUCTURES, GRATES, ETC. FOR HIS APPROVAL PRIOR TO INSTALLATION.





- 1/2"Premolded Expansion

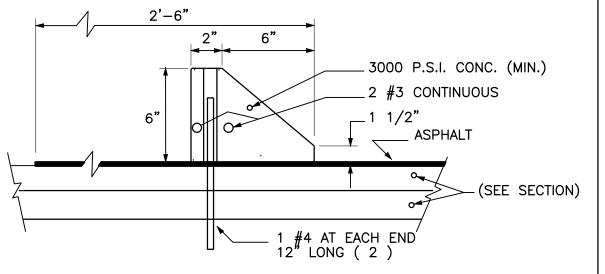
Joint Material

DETAIL "9" ACCESSIBLE PATH

EXPANSION JOINT BETWEEN

SIDEWALK & BUILDING

N.T.S.



WHEEL STOP DETAIL
PROVIDE ONE AT EACH PARKING SPACE

TRUNCATED DOME DOME PATTERN SHALL BE IN—LINE WITH DIRECTION OF TRAVEL TRUNCATED DOME TRUNCATED DOME TRUNCATED DOME SEE DETAIL) TRUNCATED DOME (SEE DETAIL)

PLAN VIEW

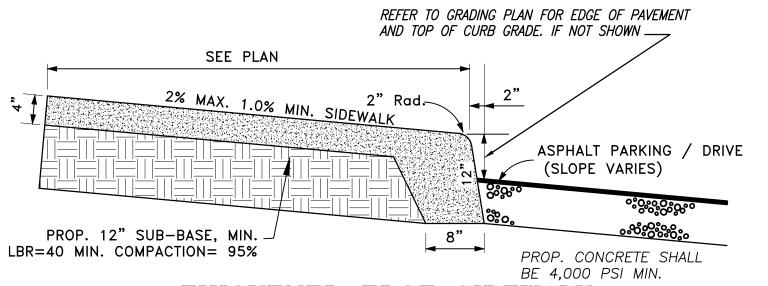
1-ALL SIDEWALK CURB RAMPS SHALL HAVE DETECTABLE WARNING SURFACES THAT EXTEND THE FULL WIDTH & RUN OF THE RAMP

2-FLUSHED SIDEWALK/ASPHALT CONNECTION SHALL HAVE A 3.0'
TACTILE MAT EXTENDING THE FULL WIDTH OF THE CONNECTION

CURB RAMP DETECTABLE WARNING

N.T.S.

NOTE: MAT SHAL BE YELLOW IN COLOR



THICKENED EDGE SIDEWALK

(Concrete Shall Be 3,000 PSI MIN.) N.T.S.

N.T.S.

GENERAL NOTES:

- 1. ALL ELEVATIONS REFER TO N.G.V.D. (1929).
 2. ALL WORK SHALL CONFORM TO THE MIAMI—DADE COUNTY PUBLIC WORKS
 DEPARTMENT'S GRADING AND DRAINAGE REGULATIONS AND STANDARDS, RER WATER
 MANAGEMENT REGULATIONS AND STANDARD FOR T
- SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION.

 3. LIME ROCK BASE COURSE: AT LEAST 97% (BY WEIGHT) OF THE MATERIAL SHALL PASS A 3.5" SIEVE AND NO MORE THAN 70% SHALL PASS A 3/4" SIEVE AND THE MATERIAL SHALL BE GRADED UNIFORMLY DOWN TO DUST. ALL CRUSHING WHICH MIGHT BE NECESSARY IN ORDER TO MEET SUCH SIZE REQUIREMENT SHALL BE DONE BEFORE THE MATERIAL IS PLACED ON THE PARKING & DRIVES AREA.
- 4. MATERIAL HAVING A LIME ROCK BEARING RATIO (L.B.R.) LESS THAN 100 WILL NOT BE ALLOWED FOR BASE MATERIAL. STABILIZED SUB—BASE SHALL HAVE A MIN.
- L.B.R.= 40 UNDER ALL ASPHALT AREAS.

 BASE MATERIAL SHALL BE COMPACTED TO 98% OF THE MODIFIED PROCTOR

 COMPACTION TEST, PER AASHTO T—180 METHOD. SUB—BASE MATERIAL SHALL BE

 COMPACTED TO 95% OF THE MODIFIED PROCTOR COMPACTION TEST, PER AASHTO
- T—180 METHOD. . PRIME COAT ON LIME ROCK BASE COURSE SHALL MEET FDOT STANDARD AS SET FORTH IN SECTION 300.
- 7. ASPHALTIC CONCRETE SHALL BE OF TYPE SP-9.5. TYPE SP-9.5 ASPHALTIC CONCRETE SHALL MEET FDOT STANDARD SPECIFICATIONS AS SET FORTH IN SECTION 333 (FDOT 2000 SPECS.), UNLESS SPECIFIED OTHERWISE.
- 8. THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. ADDITIONAL UTILITIES MAY EXIST WHICH ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITIES, BY ELECTRONIC METHODS AND/OR BY HAND EXCAVATION IN COORDINATION WITH ALL UTILITY COMPANIES, PRIOR TO BEGINNING ANY CONSTRUCTION OPERATIONS. ANY AND ALL CONFLICTS OF EXISTING UTILITIES WITH PROPOSED IMPROVEMENTS SHALL BE RESOLVED BY THE
- ENGINEER AND THE OWNER PRIOR TO BEGINNING ANY CONSTRUCTION OPERATIONS.

 9. TRAFFIC MARKING, STRIPING AND SIGNS TO BE IN CONFORMANCE WITH MIAMI-DADE COUNTY SPECIFICATIONS, MANUAL ON UNIFORM TRAFFIC DEVICES.
- 10. IN THE EVENT THAT UNSUITABLE SOILS (MUCK) ARE FOUND WITHIN THE LIMITS OF THE PROPOSED PARKING LOT & DRIVES, THE CONTRACTOR SHALL REMOVE SAID SOILS TO ITS FULL DEPTH. THE EXCAVATED MATERIAL SHALL BE SUBSTITUTED WITH 40 LBR SOILS COMPACTED TO 95% IN 12" LAYERS.
- 11. CONTRACTOR:
 a. COORDINATE YOUR WORK WITH WATER & SEWER CONTRACTOR TO AVOID
 - POTENTIAL CONFLICTS.

 b. IF EXISTING IMPROVEMENTS ARE DAMAGED, RESTORE THEM TO THEIR CONDITION AT THE BEGINNING OF YOUR WORK.
 - CONDITION AT THE BEGINNING OF YOUR WORK.
 c. NOTIFY ALL UTILITY COMPANIES BEFORE STARTING WORK.
- d. YOU ARE SOLELY RESPONSIBLE FOR COORDINATING AND GIVING NOTICE OF REQUIRED INSPECTIONS. IN DOING THIS HONOR THE LEAD TIME NEEDS OF THE RESPECTIVE AGENCIES. 12. ALL DISPOSAL MATERIAL, RUBBISH AND DEBRIS SHALL BE MADE AT LEGAL DISPOSAL
- SITE OR BY OTHER PRIOR APPROVED MANNER. MATERIAL CLEARED FROM THE SITE AND DEPOSITED ON ADJACENT OR NEARBY PROPERTY WILL NOT BE CONSIDERED AS HAVING BEEN DISPOSED SATISFACTORILY. NO SEPARATE PAYMENT WILL MADE FOR THIS.
- 13. WORK PERFORMED UNDER THIS PROJECT WILL NOT BE CONSIDERED AS COMPLETE UNTIL THE FINAL ACCEPTANCE OF THE OWNER, ENGINEER, RER, AND PUBLIC WORKS AS REQUIRED.
- 14. DENSITY TESTS SHALL BE PERFORMED EVERY 2,500 S.FT. FOR BASE AND SUB—BASE. SAID TEST SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR
- 15. CORE DRILLED SAMPLES WILL BE PERFORMED TO INSURE THAT THE THICKNESS OF MATERIAL ARE MET AS CALLED FOR IN THIS PLANS. THE CONTRACTOR WILL BE RESPONSIBLE TO INSURE THAT THE DESIGN THICKNESS ARE MET.
- 16. ALL REINFORCED CONCRETE PIPE (R.C.P.) SHALL MEET FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AS SET FORTH IN SECTIONS 430, 440, & 449.
- 7. ALL CORRUGATED ALUMINUM PIPE (C.A.P.) SHALL MEET FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AS SET FORTH IN SECTIONS 945.

 8. ALL DRAINAGE STRUCTURES SHALL HAVE A MIN. SUMP OF 24" MEASURED FROM LOWEST PIPE INVERT. ALL DRAINAGE STRUCTURES SHALL BE PLACED OVER 12" OF
- LOWEST PIPE INVERT. ALL DRAINAGE STRUCTURES SHALL BE PLACED OVER 12" OF 3/4" LIMEROCK.

 19. ALL PIPE BEDDING SHALL BE OF GOOD GRANULAR QUALITY, FREE OF EXCESSIVE FINES AN OPEN GRADED STONE NOT LARGER THAN 3/4" IS RECOMMENDED. PIPE
- FINES. AN OPEN GRADED STONE, NOT LARGER THAN 3/4" IS RECOMMENDED. PIPE BEDDING SHALL BE A MINIMUM OF 12" THICK.

 O. TRENCHES SHALL BE BACK FILLED WITH APPROVED MATERIAL FREE OF LARGE LOGS, STONES OR ROCKS AND CAREFULLY DEPOSITED AND COMPACTED IN LAYERS NOT TO EXCEED 6" UNTIL ENOUGH FILL HAS BEEN PLACED TO PROVIDE A COVER OF NOT LESS THAN ONE FOOT ABOVE THE PIPE. THE REMAINDER OF BACK FILL MATERIAL
- SHALL BE PLACED IN 12" LAYERS MOISTENED AND COMPACTED TO A MINIMUM OF 95% OF THE MODIFIED PROCTOR TEST AS PER AASHTO T—180 METHOD.

 21. INLETS AND MANHOLE LOCATION DICTATE OVER CULVERTS LENGTHS; FOR EXACT LOCATION OF STRUCTURES.
- 22. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL DRAINAGE STRUCTURES, PIPES, GRATES AND RELATED MATERIAL TO THE ENGINEER OF RECORD FOR HIS APPROVAL PRIOR TO INSTALLATION.
- 23. AT THE COMPLETION OF THE WORK THE CONTRACTOR SHALL CERTIFY THAT THE DRAINAGE SYSTEM IS CLEAN OF DEBRIS OR ANY OTHER FOREIGN OBJECT. THE SITE SHALL BE CLEAR OF ALL SURPLUS MATERIAL OR TRASH. THE PAVED AREAS SHALL BE SWEPT BROOM CLEAN.
- 14. ALL PIPE CALLED HDPE OR CPP TO BE HIGH STRENGTH CORRUGATED
 POLYETHYLENE PIPE WITH SMOOTH INTERIOR. PIPE SHALL MEET AASHTO M294 TYPE
 S: SPECIFICATION FOR CORRUGATED POLYETHYLENE PIPE, 12 TO 36 IN DIAMETER,
 ASTM D1248, ASTM D3350 & ASTM F405. PIPE INSTALLATION FOR C.P.P. SHALL BE
 IN ACCORDANCE WITH ASTM 2321: STANDARD PRACTICE FOR UNDERGROUND
- INSTALLATION OF FLEXIBLE THERMOPLASTIC SEWER PIPE. PIPE SHALL BE ADS N-12, HANCOR HI-Q OR APPROVED EQUAL. ALL JOINTS SHALL BE WATER TIGHT.

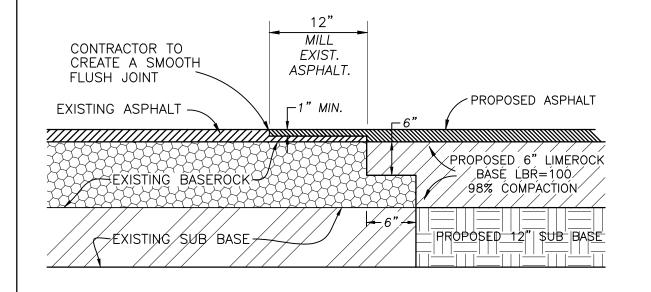
 25. ALL STORM DRAINAGE STRUCTURES SHALL BE EQUIPPED WITH FILTER CLOTH SUPPORTED BELOW THE GRATE/INLET WITH WIRE MESH OR A SIMILAR SYSTEM UPON INSTALLATION OF THE BASIN TOPS ON SITE. THE FILTER CLOTH FABRIC IS NOT TO BE REMOVED OR PERFORATED/DISTURBED FROM THE BASINS UNTIL LANDSCAPING,
- COMPLETED ON THE ENTIRE SITE.

 26. ALL STRUCTURES WITHIN PROJECT SHALL BE VACUUMED CLEAN OF ALL SILT, SAND,
 AND DEBRIS BEFORE FINAL ACCEPTANCE BY THE ENGINEER AND THE OWNER.

SOD INSTALLATION, PAVEMENT/CURBING INSTALLATION, STRIPING, AND SWEEPING IS

- AND DEBRIS BEFORE FINAL ACCEPTANCE BY THE ENGINEER AND THE OWNER.

 27. ALL STORM DRAINAGE PIPE (PERFORATED OR NON—PERFORATED) WILL BE INSTALLED AND MAINTAINED CLEAN AND CLEAR OF DEBRIS, ROCK, SAND AND SILT.
- 28. CONTRACTOR(S) SHALL BE CAUTIONED THAT INTRODUCTION OF SUCH MATERIALS AS CONSTRUCTION MATERIALS, CONCRETE AND STUCCO SLURRY OR WASH—OFF MATERIALS FROM THESE OPERATIONS, PAINT AND PAINTING ACTIVITY INGREDIENTS, OILS, HYDRAULIC FLUIDS, FUELS AND OR ANY OTHER SUCH DELETERIOUS MATERIALS, WHEN INTRODUCED INTO THE STORM DRAINAGE SYSTEM CAN AND WILL RENDER IT USELESS, POLLUTE THE SITE AND SURROUNDING SITES OR HARM THE SYSTEM'S PERFORMANCE LEVEL.



DETAIL FOR MATCHING EXISTING PAVEMENT

Schwebke Shiskin &

Associates, Inc.

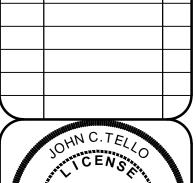
LAND SURVEYORS

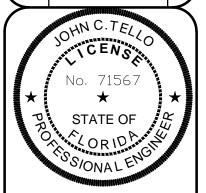
CIVIL ENGINEERS
LAND PLANNERS
LB#87
CA#87
3240 CORPORATE WAY
MIRAMAR, FL 33025

TEL: (305)652-7010
FAX: (305)652-8284

REVISIONS

Date Remarks By





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BY JOHN C. TELLO, P.E. USING A DIGITAL
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E LAKE

ADING AND DRAINAGE
DETAILS

D

PAVING, GRADING
DET,
OF MIAMI LAKES, Florid

Drawn By: EMM Date: 11/01/16
Checked By: JCT Date: 11/21/16

Order No. 206302 FB. Sketches & 00000 Pg.00

Drawing Status: PERMIT SET

By:______ JOHN C. TELLO

JOHN C. TELLO

ASST. VICE-PRESIDENT

Registered Engineer No. 71567

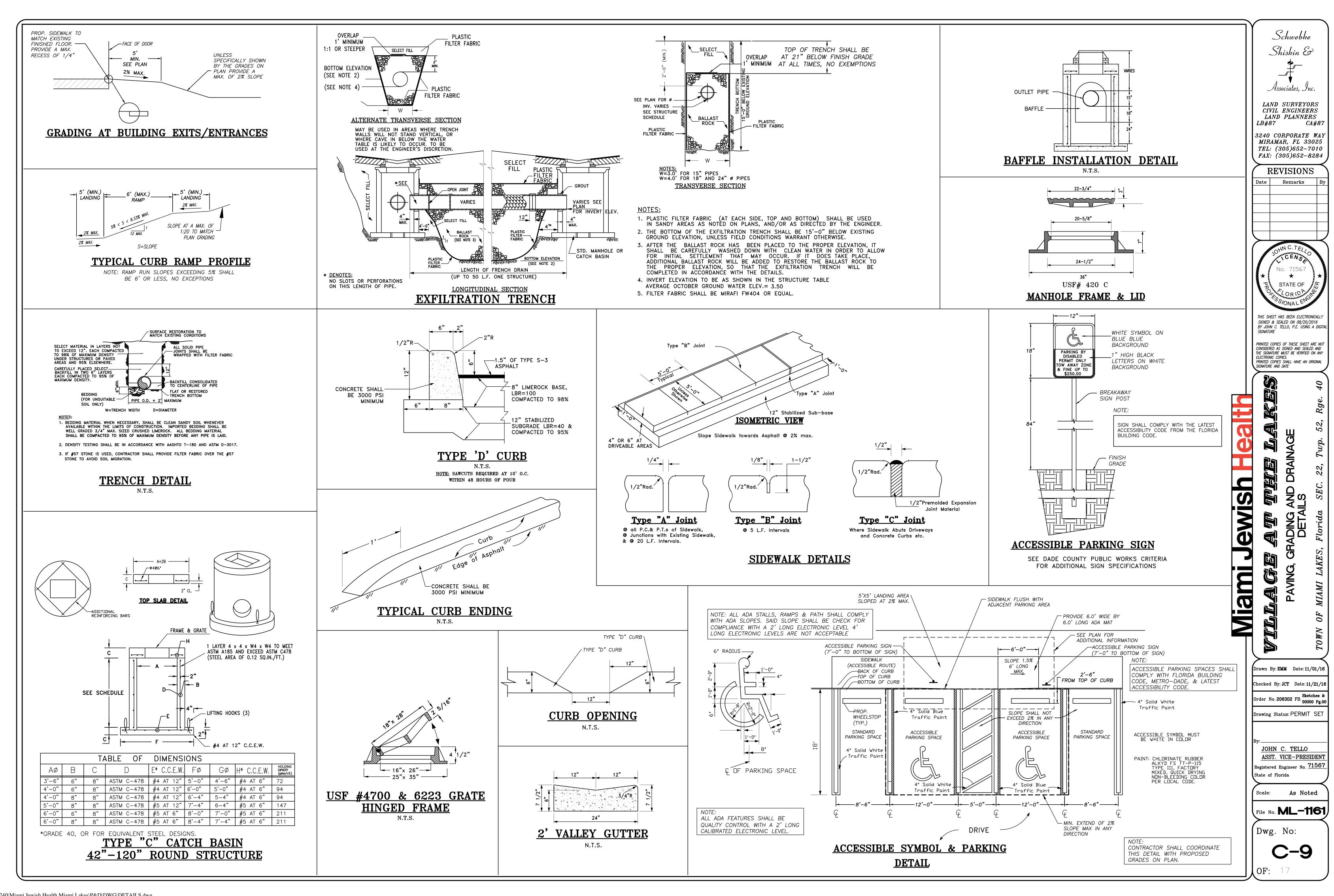
State of Florida

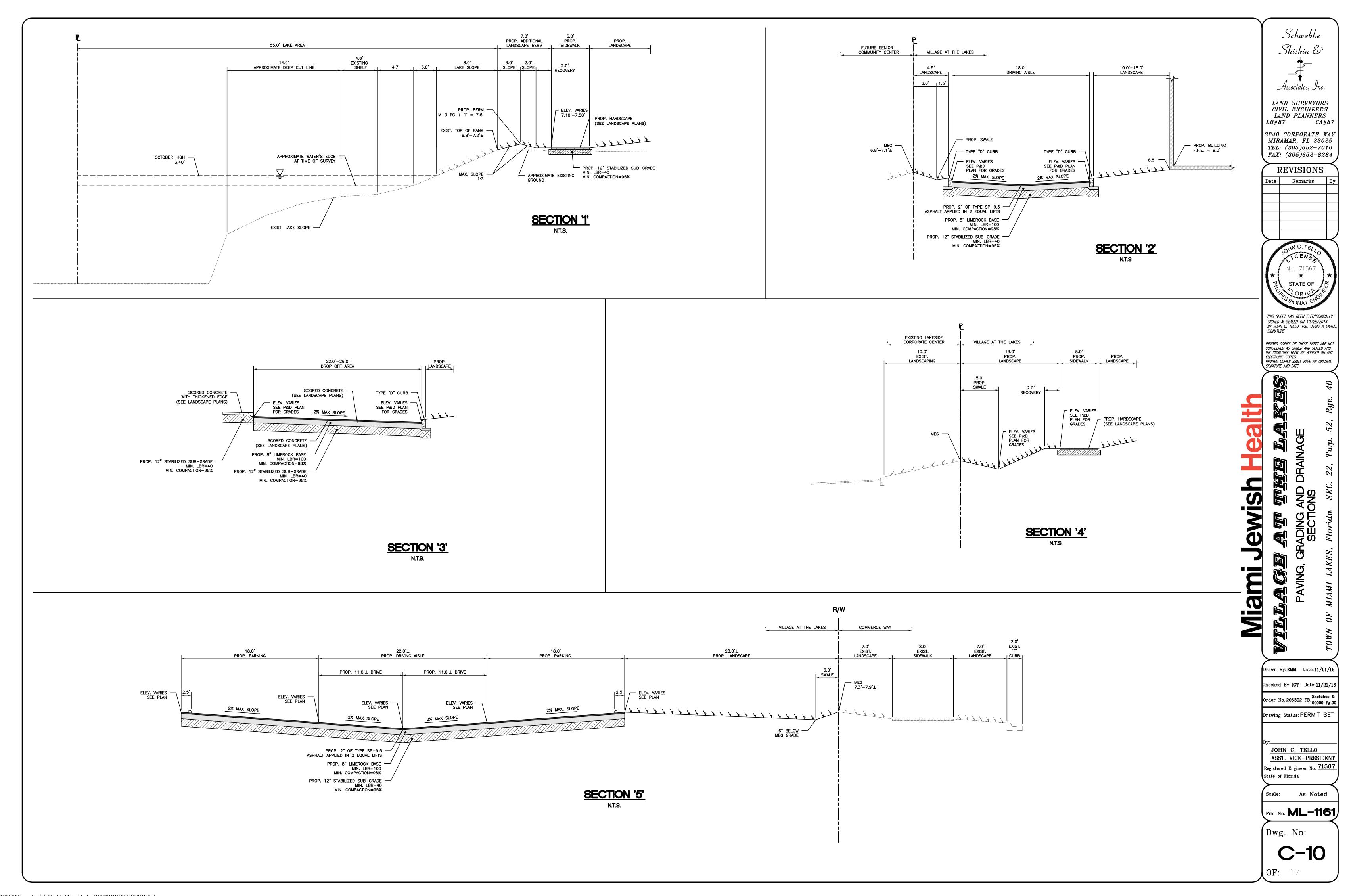
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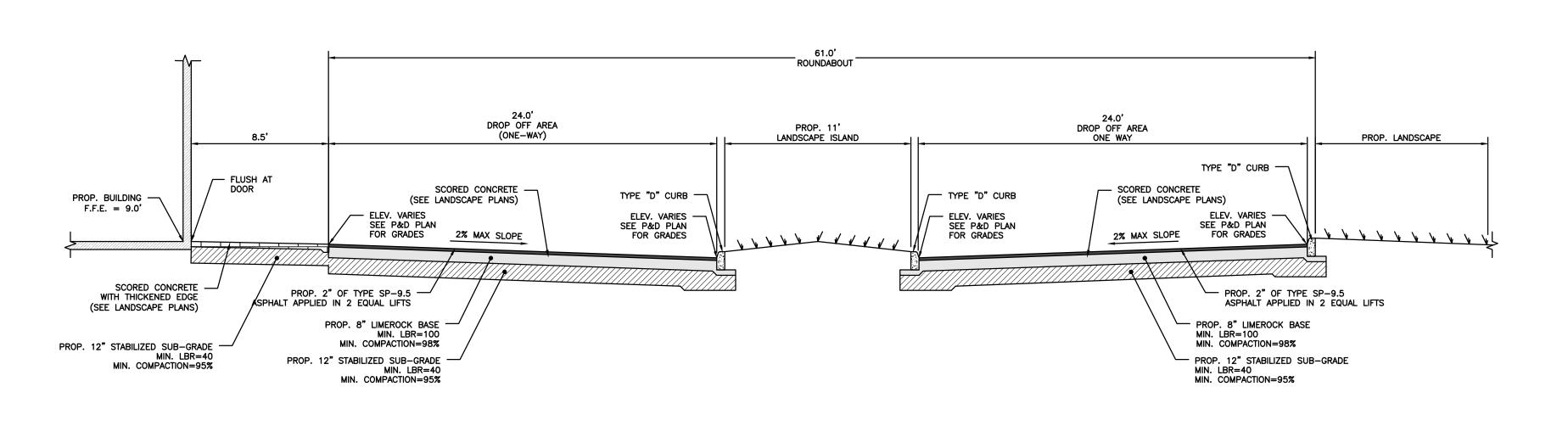
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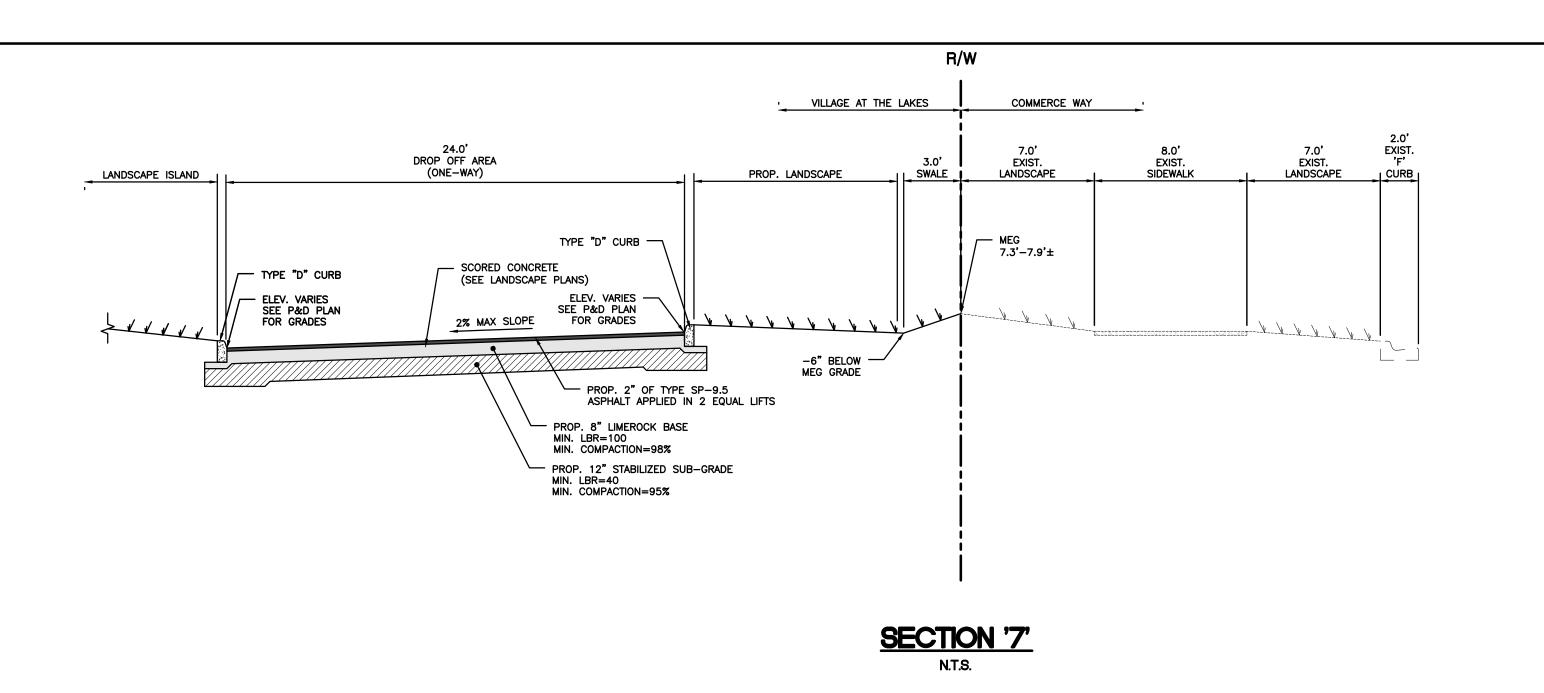
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SECTION '6'

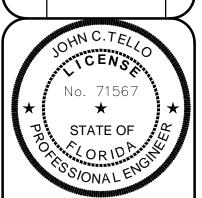


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LAND SURVEYORS CIVIL ENGINEERS LAND PLANNERS LB#87 CA#87

3240 CORPORATE WAY MIRAMAR, FL 33025 TEL: (305)652-7010 FAX: (305)652-8284

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Drawn By: **EMM** Date: 11/01/16 Checked By: JCT Date: 11/21/16

Order No. 206302 FB. Sketches & 00000 Pg.00

Drawing Status: PERMIT SET

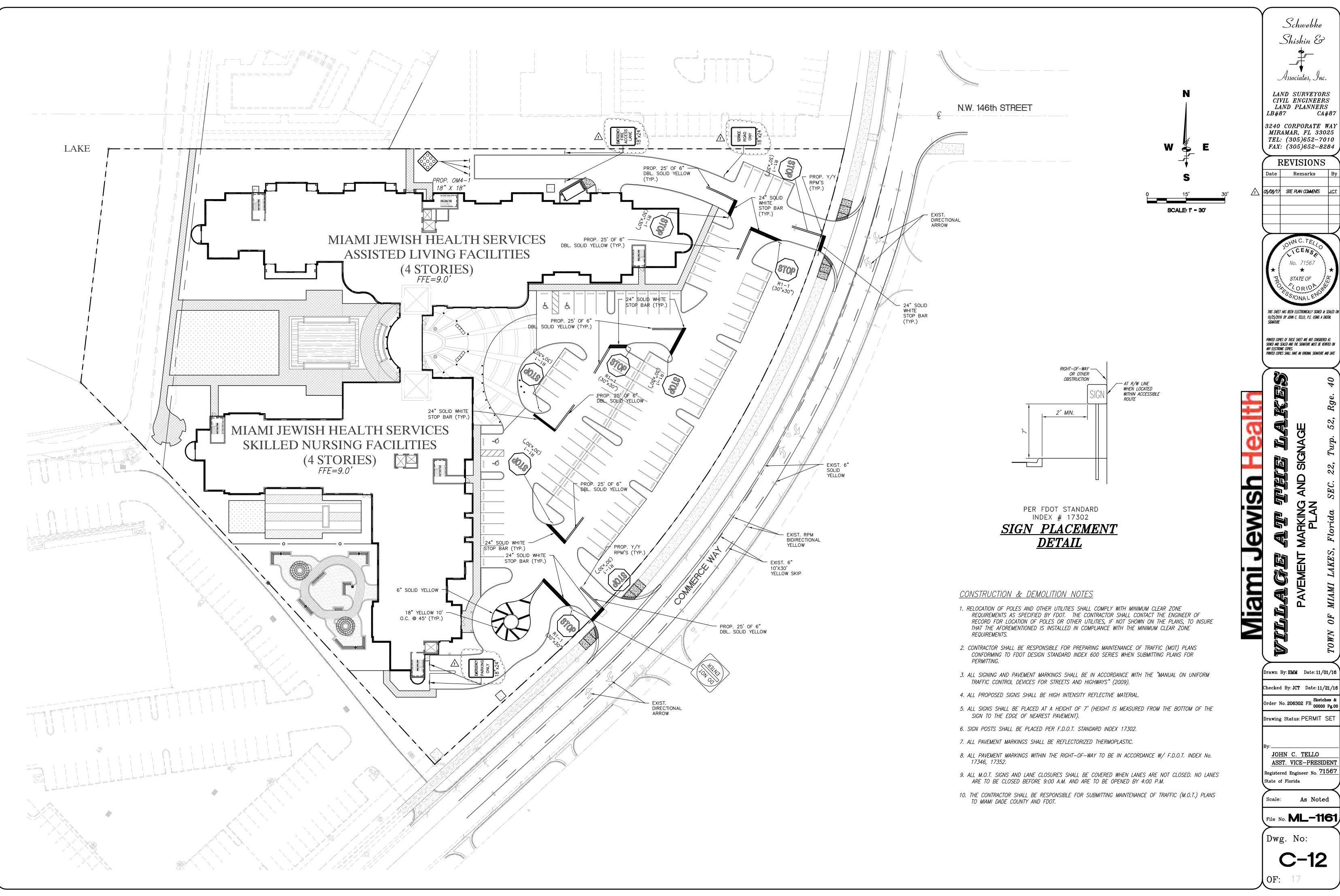
JOHN C. TELLO ASST. VICE-PRESIDENT Registered Engineer No. 71567

As Noted

File No. **ML-1161**

Dwg. No:

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LAND SURVEYORS
CIVIL ENGINEERS
LAND PLANNERS
LB#87 CA#8

3240 CORPORATE WAY MIRAMAR, FL 33025 TEL: (305)652-7010

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05/08/17 STE PLAN COMMENTS

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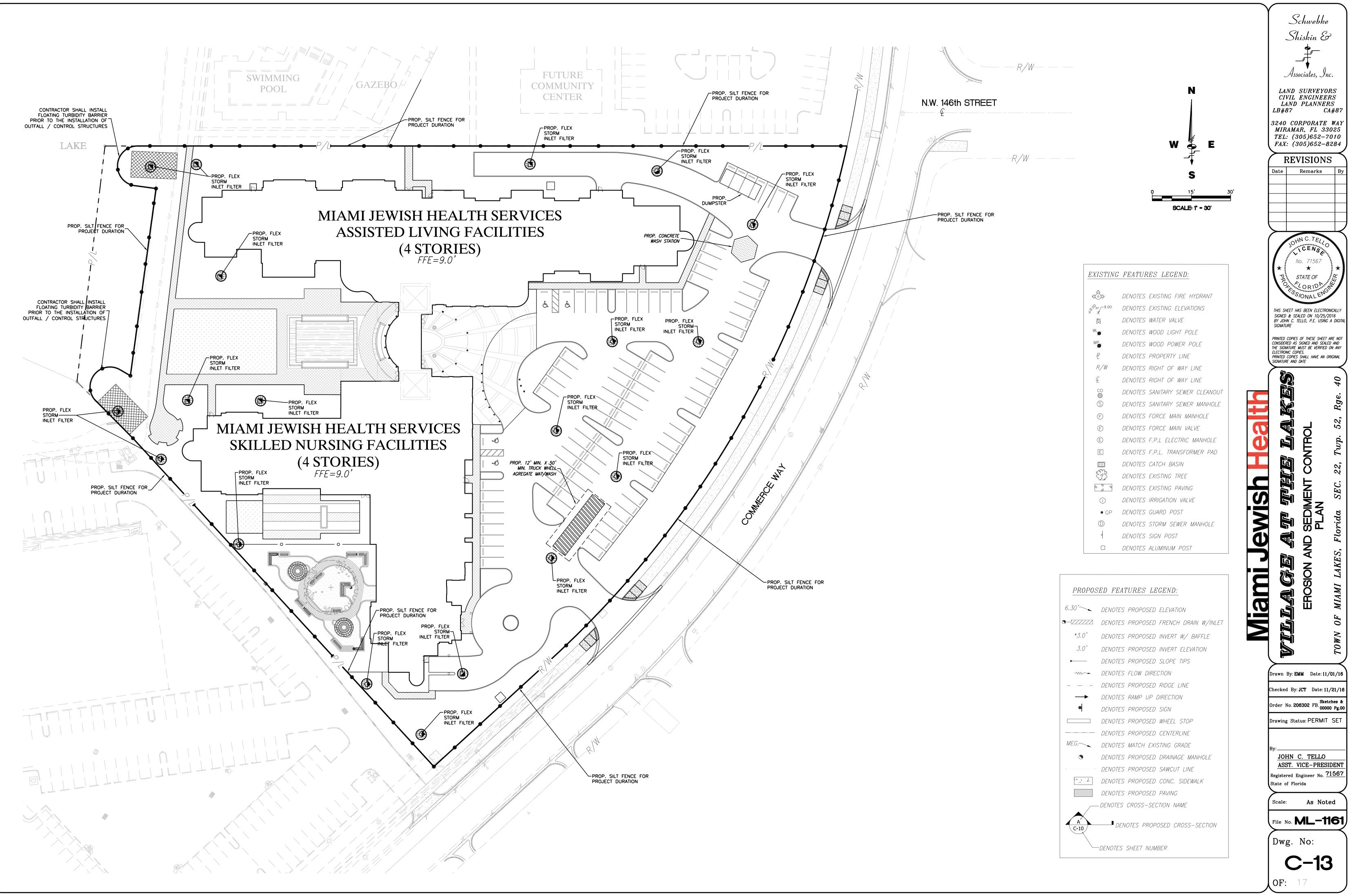
Drawn By: **EMM** Date: **11/01/16** Checked By: JCT Date: 11/21/16

Order No. **206302** FB. Sketches & **00000** Pg.00 Drawing Status: PERMIT SET

JOHN C. TELLO ASST. VICE-PRESIDENT

As Noted

File No. **ML-1161**



FLEXSTORM OPERATION & MAINTENANCE PLAN



Installation Instructions:

- Remove the grate from the casting or concrete drainage structure.
- 2. Clean the ledge (lip) of the casting frame or drainage structure to ensure it is free of stone and dirt.
- Drop in the FLEXSTORM In let Filter through the clear opening and be sure the suspension hangers rest firmly on the inside ledge (lip) of the casting.
- 4. Replace the grate and confirm it is elevated no more than 1/8", which is the thickness of the steel hangers.

Frequency of Inspections:

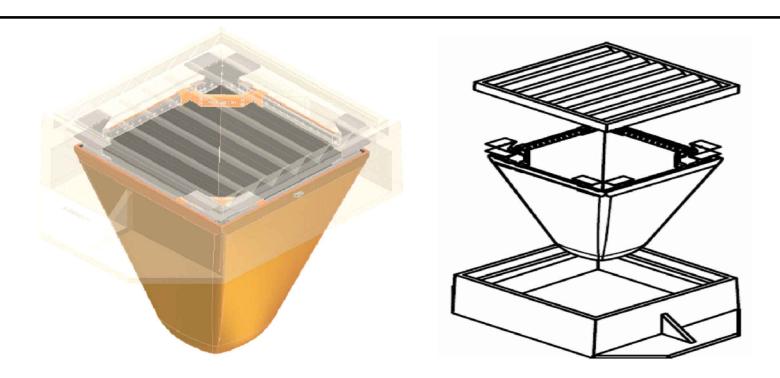
- 1. Construction site in spection should occur following each ½" or more rain event.
- Post Construction inspections should occur three times per year (every four months) in areas with mild year round rainfall and four times per year (every three months Feb-Nov) in areas with summer rains before and after the winter snowfall season.
- 3. Industrial application site inspections (loading ramps, wash racks, maintenance facilities) should occur on a regularly scheduled basis no less than three times per year.

Maintenance Guidelines:

- Empty the sediment bag if more than half filled with sediment and debris, or as directed by the Engineer.
- Remove the grate, engage the lifting bars or handles with the FLEXSTORM Removal Tool, and lift from the drainage structure.
- 3. Dispose of the sediment or debris as directed by the Engineer or Maintenance Contract in accordance with EPA guidelines.
- 4. As an alternative, an industrial vacuum may be used to collect the accumulated sediment.
- Remove any caked on silt from the sediment bag and reverse flush the bag with medium spray for optimal filtration.
- 6. Replace the bag if torn or punctured to ½" diameter or greater on the lower half of the bag.
- 7. Post Construction PC Bags maint: At 50% saturation, the average 2' x 2' Adsorb-it lined PC filter will retain approx 75 oz (4.2 lbs) of oil and should be serviced or replaced. It can be centrifuged or passed through a wringer to recover the oils, and the fabric reused with 85% to 90% efficacy. It may also be recycled for its fuel value through waste to energy incineration.
- 8. MyCelx Skimmer Pouches: The skimmers start yellow in color and will gradually turn brown as they become saturated, indicating time for replacement. Each MyCelx skimmer pouch will absorb approximately 89 oz (5 lbs) of oil before requiring replacement.
- 9. Dispose of all oil contaminated products in accordance with EPA guidelines.

Sediment Bag Replacement:

- 1. Remove the bag by loosening or cutting off the clamping band.
- 2. Take the new sediment bag, which is equipped with a stainless steel worm drive clamping band, and use a screw driver to tighten the bag around the frame channel.
- 3. Ensure the bag is secure and that there is no slack around the perimeter of the band.

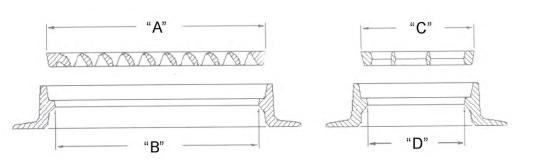


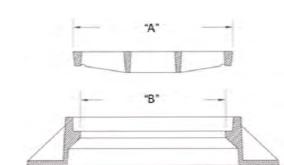
STRUCTURE ID#/LOCATION:

DATE	TASK PERFORMED	INSPECTOR

1. INDENTIFY YOUR FRAME STYLE, SIZE, AND MATERIAL

STYLE	FRAME STYLE AND SIZE	Frame P/N:
0	Small Round (up to 20.0" dia grates (A) dim)	
ROUND	Med Round (20.1" - 26.0" dia grates (A) up to 25" dia openings (B))	62MRD
ROL	Large Round (26.1" - 32.0" dia grates (A) up to 30" openings (B))	62LRD
	XL Round (32.1" dia - 39" dia grates (A) up to 37" dia openings (B))	62XLRD
Е	Small Rect / Square (up to 16" (B) x 16" (D) openings or 64" perimeter)	62SSQ
RECT/ SQUARE	Med Rect / Square (up to 24" (B) x 24" (D) openings or 96" perimeter)	62MSQ
REG	Large Rect / Square (up to 36" (B) x 24" (D) openings or 120" perimeter)	62LSQ
XL Rect / Square (side by side <u>2</u>	XL Rect / Square (side by side 2 pc set to fit up to 48" (B) x 36" (D) openings)	62XLSQ
0	Small Rect / Square (ref Rect sizing; shipped with Magnetic Curb Flaps)	62SCB
1BC ETS	Med Rect / Square (ref Rect sizing; shipped with Magnetic Curb Flaps)	62MCB
COMBO	Large Rect / Square (ref Rect sizing; shipped with Magnetic Curb Flaps)	62LCB
)	XL Rect / Square (ref Rect sizing; shipped with Magnetic Curb Flaps)	62XLCB
T	12" diameter Nyloplast castings (Stainless Steel Framing standard)	6212NY
-AS	15" diameter Nyloplast castings (Stainless Steel Framing standard)	6215NY
NYLOPLAST	18"diameter Nyloplast castings (Stainless Steel Framing standard)	6218NY
Z-K	24" diameter Nyloplast castings (Stainless Steel Framing standard)	6224NY
4	30" diameter Nyloplast castings (Stainless Steel Framing standard)	6230NY
F	Open Throat Gutters - Curb Opening Size	
WALL MOUNT	Up to 4' (1 Filter and Mounting Hardware)	62WM1
ž	Between 4' and 8' (2 Filters and Mounting Hardware)	62WM2
ALL	Between 8' and 12' (3 Filters and Mounting Hardware)	62WM3
M	Between 12' and 16' (4 Filters and Mounting Hardware)	62WM4
U	PGRADED FRAMING MATERIAL OPTIONS (STANDARD IS ZINC PLATED)	SUFFIX
CHROME	PLATED FRAMING FOR HIGH SALT EXPOSURE	- CHR
STAINLES	S STEEL FRAMING FOR HIGH SALT AND/OR CHEMICAL EXPOSURE	- SS





2. SELECT YOUR FILTER BAG PART NUMBER

FLEXSTORM FILTER BAGS	(22" depth)	(12" depth)	Clean Water Flow	Min A.O.S.
FLEXSTORIVIFILTER DAGS	STD Bag P/N	Short Bag P/N	Rate (GPM/SqFt)	(US Sieve)
FX: Standard Woven Bag	FX	FX-S	200	40
FX+: Woven w/ MyCelx	FXP	FXP-S	200	40
FXO: Woven w/ Oil Boom	FXO	FXO-S	200	40
PC: Post Construction Bag	PC	PC-S	137	140
PC+: PC Bag w/ MyCelx	PCP	PCP-S	137	140
LL: Litter and Leaf Bag	LL	LL-S	High	3.5
IL: IDOT Non-Woven Bag	IL	IL-S	145	70

3. CREATE YOUR FLEXSTORM INLET FILTER PART NUMBER

		-	
Frame P/N from	Filter Bag P/N		Framing
Step 1.	from Step 2.		Material

SPECIFICATIONS FOR STANDARD BAGS BY NOMINAL SIZE						
Nominal Bag Size	Solids Storage (CuFt)	Filtered F FX (Woven)	PC (Post Constr)	t 50% Max IL (Non Woven)	* PC Oil Retent (Oz)	**PCP Oil Retent (Oz)
Small	1.6	1.2	0.8	0.9	66	155
Medium	2.1	1.8	1.2	1.3	96	185
Large	3.8	2.2	1.5	1.6	120	209
XL	4.2	3.6	2.4	2.6	192	370
* PC filter bag at 50% max adsorption capacity						
** PC filter bag at 50% capacity and MyCelx skimmer at 100% capacity						

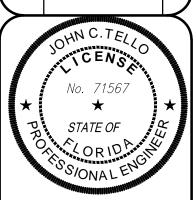
Schwebke Shiskin &

Shiskin &

LAND SURVEYORS
CIVIL ENGINEERS
LAND PLANNERS
LB#87 CA#8

3240 CORPORATE WAY MIRAMAR, FL 33025 TEL: (305)652-7010 FAX: (305)652-8284

1	REVISIONS					
	Date	Remarks	Ву			
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FIET LASKES

ALEN SECTION AND SEDIMENT CO

Drawn By: **EMM** Date: 11/01/16

Checked By: **JCT** Date: 11/21/16

Order No. 206302 FB. Sketches & 00000 Pg.00

Drawing Status: PERMIT SET

JOHN C. TELLO

ASST. VICE-PRESIDENT

Registered Engineer No. 71567

State of Florida

ale: As Noted

File No. **ML-1161**

Dwg. No:



)F: 17

Construction Specifications

1. Barriers should be a bright color (yellow or "international" orange are recommended) that will attract the attention of nearby boaters.

- 2. The curtain fabric must meet the minimum requirements noted in Table 3.27-A.
- 3. Seams in the fabric shall be either vulcanized welded or sewn, and shall develop the full strenath of the fabric.
- 4. Floatation devices shall be flexible, buoyant units contained in an individual floatation sleeve or collar attached to the curtain. Buoyancy provided by the floatation units shall be sufficient to support the weight of the curtain and maintain a freeboard of at least 3 inches (8 cm) above the water surface level. (See Plate 4.45c)
- 5. Load lines must be fabricated into the bottom of all floating turbidity curtains. Type II and Type Ill must have load lines also fabricated into the top of the fabric. The top load line shall consist of woven webbing or vinyl-sheathed steel cable and shall have a break strength in excess of 10,000 pounds (4.5 t). The supplemental (bottom) load—line shall consist of a chain incorporated into the bottom hem of the curtain of sufficient weight to serve as ballast to hold the curtain in a vertical position. Additional anchorage shall be provided as necessary. The load lines shall have suitable connecting devices which develop the full breaking strength for connecting to load lines in adjacent sections (See Plates 4.45a and 4.45b which portray this orientation).
- 6. External anchors may consist of 2 x 4 inch (5 x 10 cm) or 2-1/2 inch (6 cm) minimum diameter wooden stakes, or 1.33 pounds/linear foot (2 kg/m) steel posts when Type I installation is used: when Type II or Type III installations are used, bottom anchors should be used.
- 7. Bottom anchors must be sufficient to hold the curtain in the same position relative to the bottom of the watercourse without interfering with the action of the curtain. The anchor may dig into the bottom (grappling hook, plow or fluke—type) or may be weighted (mushroom type) and should be attached to a floating anchor buoy via an anchor line. The anchor line would then run from the buoy to the top load line of the curtain. When used with Type III installations, these lines must contain enough slack to allow the buoy and curtain to float freely with tidal changes without pulling the buoy or curtain down and must be checked regularly to make sure they do not become entangled with debris. As previously noted, anchor spacing will vary with current velocity and expected wind and wave action; manufacturer's recommendations should be followed. See orientation of external anchors and anchor buoys for tidal installation in Plate 4.45b.

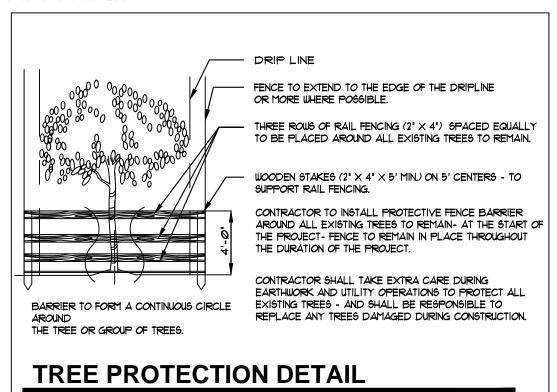
- 1. In the calm water of lakes or ponds (Type I installation) it is usually sufficient to merely set the curtain end stakes or anchor points (using anchor buoys if bottom anchors are employed), then tow the curtain in the furled condition out and attach it to these stakes or anchor points. Following this, any additional stakes or buoyed anchors required to maintain the desired location of the curtain may be set and these anchor points made fast to the curtain. Only then, the furling lines should be cut to let the curtain skirt drop.
- 2. In rivers or in other moving water (Type II and Type III installations) it is important to set all the curtain anchor points. Care must be taken to ensure that anchor points are of sufficient holding power to retain the curtain under the expected current conditions, before putting the furled curtain into the water. Anchor buoys should be employed on all anchors to prevent the current from submerging the flotation at the anchor points. If the moving water into which the curtain is being installed is tidal and will subject the curtain to currents in both directions as the tide changes, it is important to provide anchors on both sides of the curtain for two reasons: a) Curtain movement will be minimized during tidal current reversals. b) The curtain will not overrun the anchors pull them out when the tide reverses. When the anchors are secure, the furled curtain
- should be secured to the upstream anchor point and then sequentially attached to each next downstream anchor point until the entire curtain is in position. At this point, and before unfurling, the "lay" of the curtain should be assessed and any necessary adjustments made to the anchors. Finally, when the location is ascertained to be as desired, the furling lines should be cut to allow the skirt to drop.
- 3. Always attach anchor lines to the flotation device, not to the bottom of the curtain. The anchoring line attached to the floatation device on the downstream side will provide support for the curtain. Attaching the anchors to the bottom of the curtain could cause premature failure of the curtain due to the stresses imparted on the middle section of the curtain.
- 4. There is an exception to the rule that turbidity curtains should not be installed across channel flows; it occurs when there is a danger of creating a silt buildup in the middle of a watercourse, thereby blocking access or creating a sand bar. Curtains have been used effectively in large areas of moving water by forming a very long—sided, sharp "V" to deflect clean water around a work site, confine a large part of the silt—laden water to the work area inside the "V" and direct much of the silt toward the shoreline. Care must be taken, however, not to install the curtain perpendicular to the water current.
- 5. The effectiveness of the barrier can be increased by installing two parallel curtains, separated at regular intervals by 10' (3 m) long wooden boards or lengths of pipe.

<u>Removal</u>

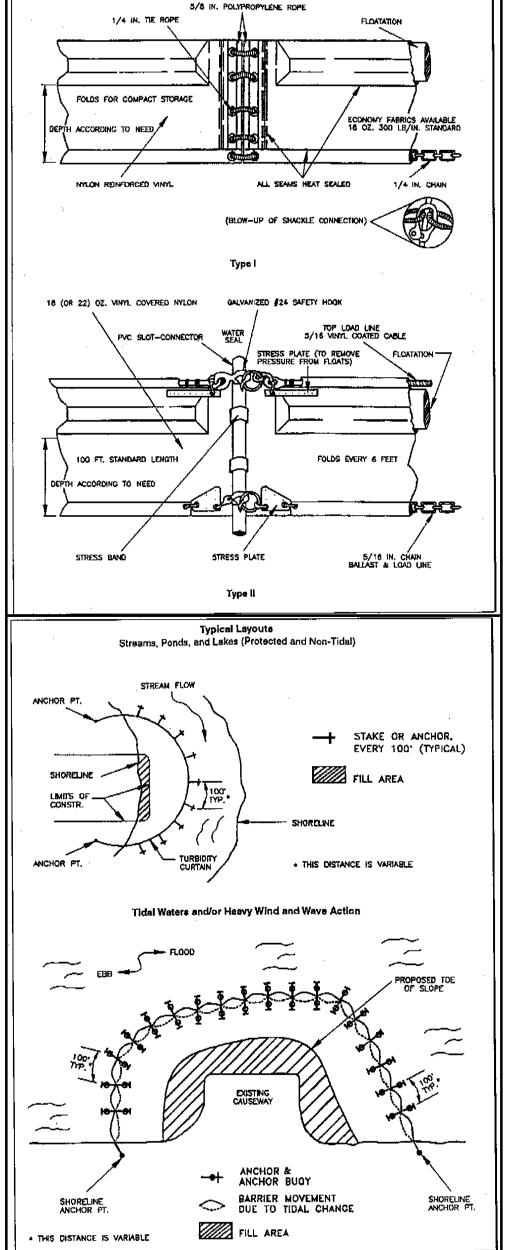
- 1. Care should be taken to protect the skirt from damage as the turbidity curtain is dragged from the water. 2. The site selected to bring the curtain ashore should be free of sharp rocks, broken cement, debris, etc. so as to minimize damage when hauling the curtain over the area.
- 3. If the curtain has a deep skirt, it can be further protected by running a small boat along its length with a crew installing furling lines before attempting to remove the curtain from the water.

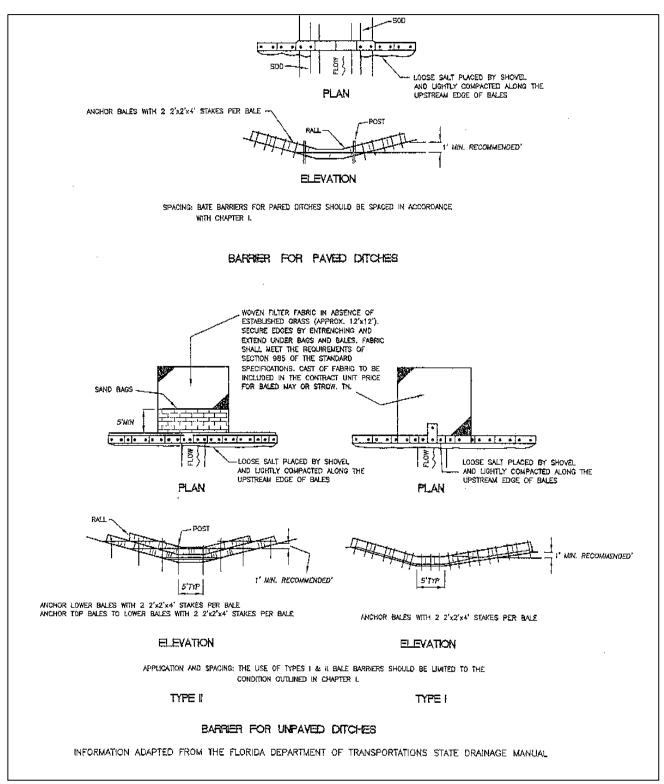
Maintenance

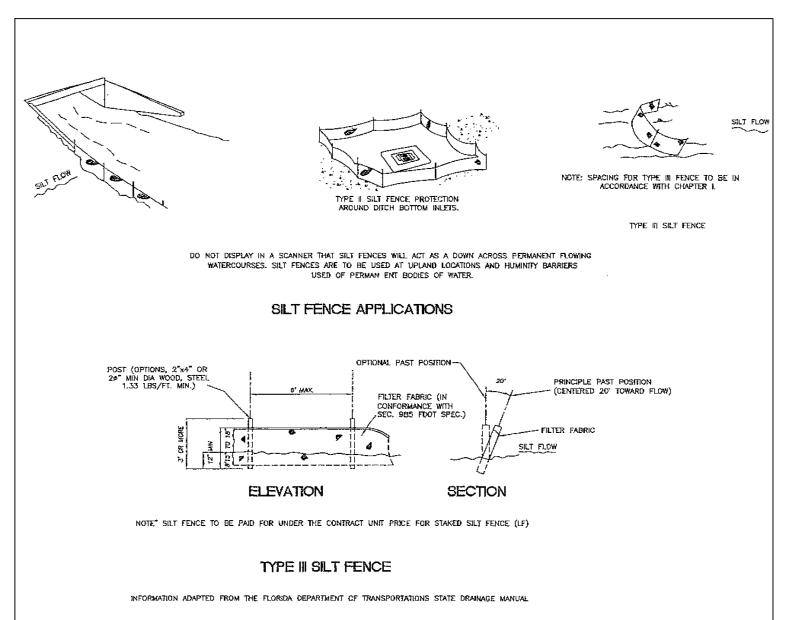
- 1. The developer/owner shall be responsible for maintenance of the filter curtain for the duration of the project to ensure the continuous protection of the watercourse.
- 2. Should repairs to the geotextile fabric become necessary, there are normally repair kits available from the manufacturers; manufacturer's instructions must be followed to ensure the adequacy of the repair.
- 3. When the curtain is no longer required as determined by the inspector, the curtain and related components shall be removed in such a manner as to minimize turbidity. Sediment shall be removed and the original depth (or plan elevation) restored before removing the curtain. Remaining sediment shall be sufficiently settled before removing the curtain. Any spoils must be taken to an upland area and stabilized.



N.T.S.







GENERAL NOTES

Construction Specifications:

Materials

- 1. Synthetic filter fabric shall be a pervious sheet of propylene, nylon, polyester, or polyethylene yarn. Synthetic filter fabric shall contain ultraviolet ray inhibitors and stabilizers to provide a minimum of 6 months of expected usable construction life at a temperature range of 0_ F to 120_ F (−17C to 49C).
- 2. Burlap shall be 10 ounces per square yard (340 g/m2) fabric.
- 3. Posts for silt fences shall be either 4 inch (10 cm) diameter wood, or 1.33 pounds per linear foot (2 kg/m) steel with a minimum length of 5 feet (1.5 m). Steel posts shall have projections for fastening wire to them.
- 4. Stakes for filter barriers shall be $1" \times 2"$ (2.5 x 5 cm) wood (preferred), or equivalent metal with a minimum length of 3 feet (90 cm).
- 5. Wire fence reinforcement for silt fences using standard strength filter cloth shall be a minimum of 36 inches (90 cm) in height, a minimum of 14 gauge and shall have a maximum mesh spacing of 6 inches (15 cm).

Sheet Flow Application:

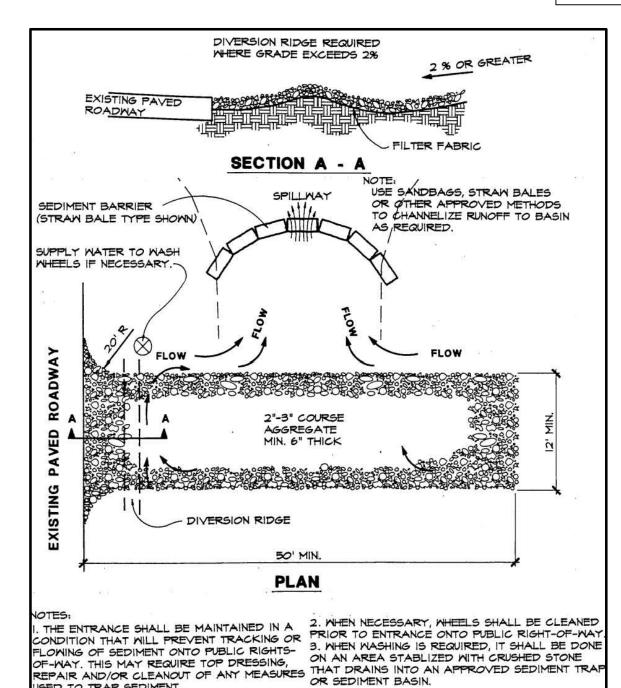
<u>Silt Fence</u>

This sediment barrier uses standard strength or extra strength synthetic filter fabrics. It is designed for situations in which only sheet or overland flows are expected. (See Plate 4.06d)

- 1. The height of a silt fence shall not exceed 36 inches (90 cm). Higher fences may impound volumes of water sufficient to cause failure of the structure. 2. The filter fabric shall be purchased in a continuous roll cut to the length of the barrier to avoid the use of joints. When joints are necessary, filter cloth shall be spliced as described in item No. 8 below.
- 3. Posts shall be spaced a maximum of 10 feet (3 m) apart at the barrier location and driven securely into the ground a minimum of 12 inches (30 cm). When extra strength fabric is used without the wire support fence, post spacing shall not exceed 6 feet (1.8 m).
- 4. A trench shall be excavated approximately 4 inches (10 cm) wide and 4 inches (10 cm) deep along the line of posts and upslope from
- 5. When standard strength filter fabric is used, a wire mesh support fence shall be fastened securely to the upslope side of the posts using heavy duty wire staples at least 1 inch (25 mm) long, tie wires, or hog rings. The wire shall extend into the trench a minimum of 2 inches (5 cm) and shall not extend more than 36 inches (90 cm) above the original ground surface.
- 6. The standard strength filter fabric shall be stapled or wired to the fence, and 8 inches (20 cm) of the fabric shall be extended into the trench. The fabric shall not extend more than 36 inches (90 cm) above the original ground surface.
- 7. When extra strength filter fabric and closer post spacing are used, the wire mesh support fence may be eliminated. In such a case, the filter fabric is stapled or wired directly to the posts with all other provisions of item No. 6 applying.
- 8. When attaching two silt fences together, place the end post of the second fence inside the end post of the first fence. Rotate both posts at least 180 degrees on a clockwise direction to create a tight seal with the filter fabric. Drive both posts into the ground and bury the flap. (See Plate 4.06a)
- 9. The trench shall be backfilled and the soil compacted over the filter fabric.
- 10. The most effective application consists of a double row of silt fences spaced a minimum of three feet apart. The three foot separation is so that if the first row collapses it will not fall on the second row. Wire or synthetic mesh is may be used to reinforce the first row. (See Plate 4.06c)
- 11. When used to control sediments from a steep slope, silt fences should be placed away from the toe of the slope for increased holding
- 12. Silt fences shall be removed when they have served their useful purpose, but not before the upslope area has been permanently stabilized.

<u>Maintenance</u>

- 1. Silt fences and filter barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. Any required
- 2. Should the fabric on a silt fence or filter barrier decompose or become ineffective before the end of the expected usable life and the barrier still be necessary, the fabric shall be replaced promptly.
- 3. Sediment deposits should be removed after each storm event. They must be removed when deposits reach approximately one-half the
- 4 Wind SCREEN BEHIND SILT FENCEs must be kept orderly at all times
- 5. Construction entrances must be kept in working condition
- 6. Protect all existing trees during construction
- 7. Maintain all BMP's at existing inlets until the completion of construction.



Prefabricated Drop Inlet Internal Filter Bag

- 1. Remove the grate over the catch basin and insert the filter device, then replace the grate to hold the device in position.
- 2. When sediments have accumulated to within 1 foot (30 cm) of the grate, the filter insert must be removed by a front-end loader or forklift. The filter may be discarded and replaced, or it may be emptied, cleaned, and
- 3. Contractor shall install and maintain an internal filter bag, or equivalent, on all existing and proposed catch basins throughout the duration of construction.

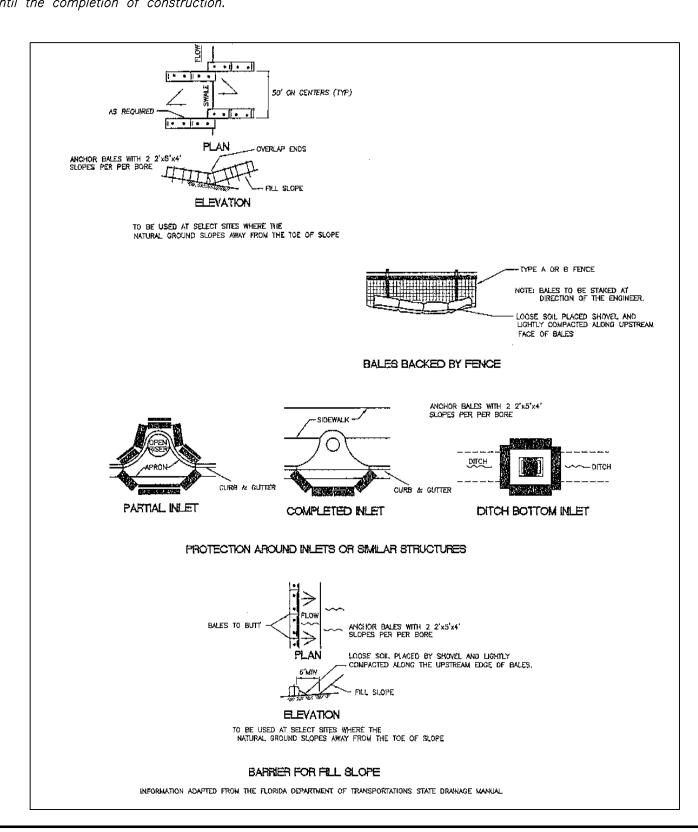
If conditions on the site are such that most of the mud is not removed by the vehicles traveling over the stone, then the vehicle tires must be washed before entering a public road. Wash water must be carried away from the entrance to a settling area to remove sediment (see Figure 4.3b of the Florida Stormwater Erosion and Sedimentation Control Inspector's Manual). A wash rack may also be used to make washing more convenient and effective (see Figure 4.3c of the Florida Stormwater Erosion and Sedimentation Control Inspector's Manual).

The entrance should be located to provide for maximum utility by all construction vehicles.

Construction Specifications

The entrance area should be cleared of all vegetation, roots, and other objectionable material. A geotextile should be laid down to improve stability and simplify maintenance when gravel is used. The gravel shall then be placed over the geotextile to the specified dimensions.

The stabilized construction exit shall be maintained in a condition that will prevent the tracking or flow of mud onto public rights of way. This may require periodic maintenance as conditions demand, and the repair and/or cleanout of any structures used to trap sediments. All materials spilled, dropped, washed, or tracked from vehicles onto roadways or into storm drains must be removed immediately. Look for signs of trucks and trailered equipment "cutting corners" where the construction exit meets the roadway. Sweep the paved road as

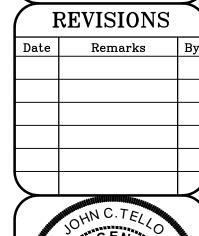


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3240 CORPORATE WAY MIRAMAR, FL 33025 TEL: (305)652-7010 FAX: (305)652-8284





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