



20' 0 20'  
SCALE 1"=20'

BAR IS TWO INCHES ON ORIGINAL DRAWINGS IF  
NOT TWO INCHES ON THIS SHEET ADJUST  
SCALES ACCORDINGLY

Seal:

Consultants:

STRUCTURAL ENGINEER  
TKW Consulting Engineers  
5621 Banner Drive,  
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LANDSCAPE ARCHITECT  
Landscape Architecture, LLC  
2525 Ponce de Leon Blvd., Suite 300  
Coral Gables, Florida 33134

Submissions:

2013.02.15 - Bidding Documents

**FIRE STATION #2**

616 Simonton Street, Key West, Florida

**BUILDING AND SITE DEVELOPMENT**

FOR  
City of Key West, 3132 Flagler Avenue, Key West, Florida 33040

Drawing Size | Project #  
MK-12060

Drawn By: | Checked By:

Title:

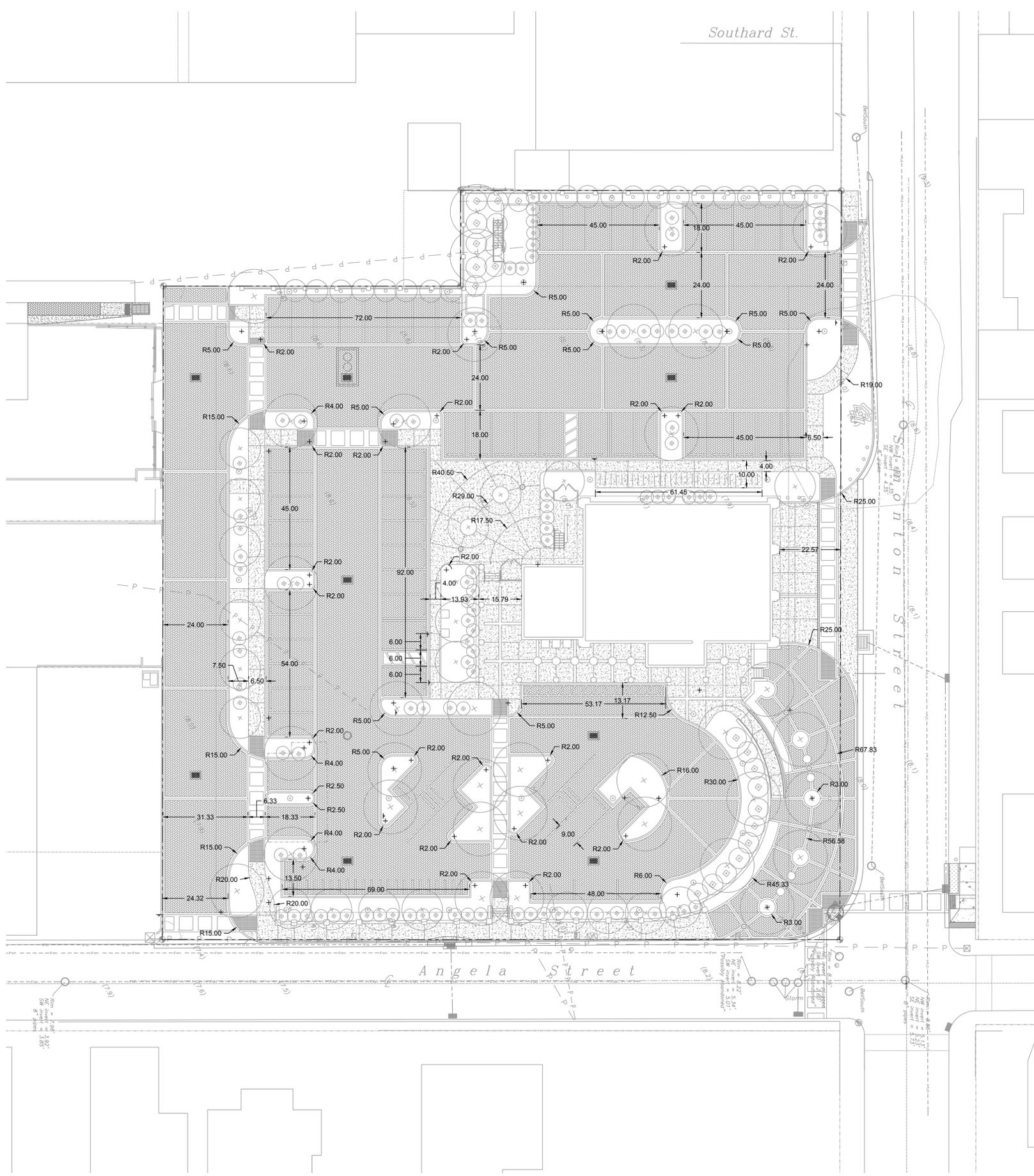
GEOMETRY PLAN

Sheet Number:

**C-4**

Date: February 15, 2013

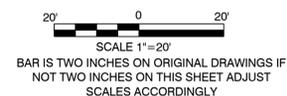
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**LEGEND**

- PROJECT LIMITS
- [Stamped Pattern] ASPHALT (STAMPED PATTERN)
- [Grid Pattern] CONCRETE PAVEMENT
- [Dotted Pattern] ADA DETECTABLE WARNING SURFACE

NOTE: SYMBOLS IN LEGEND ARE NOT TO SCALE



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FOR  
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MK-12060

Drawn By: Checked By:

Title:  
**DRAINAGE & GRADING PLAN**

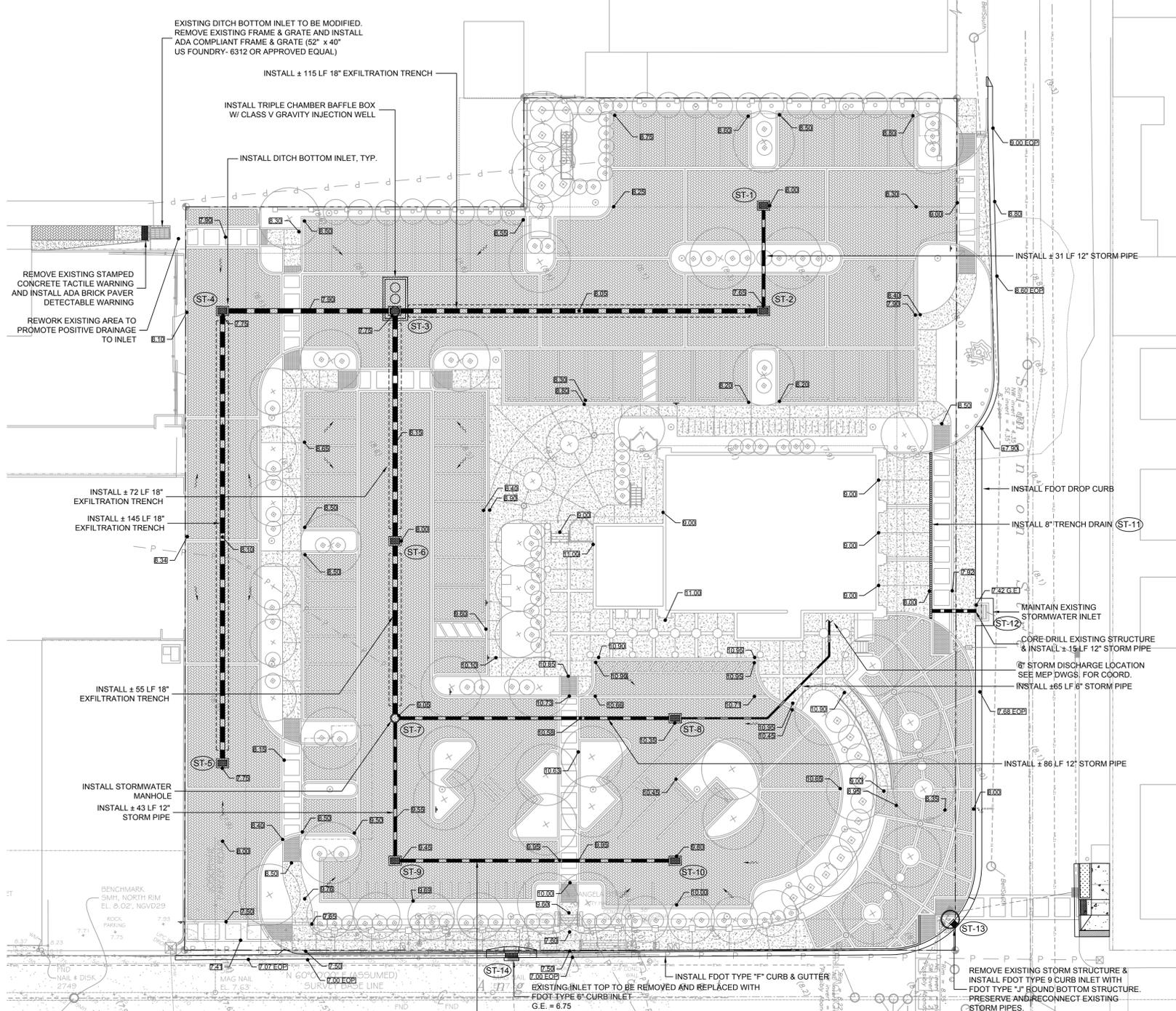
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Date: February 15, 2013

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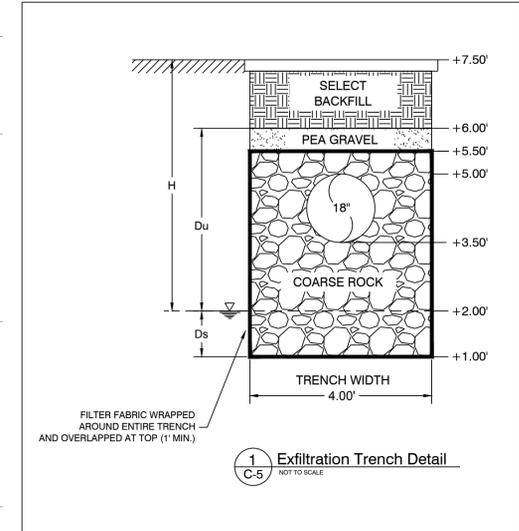
Southard St.



**LEGEND**

- PROJECT LIMITS
- APSHALT (STAMPED PATTERN)
- CONCRETE PAVEMENT
- ADA DETECTABLE WARNING SURFACE
- EXISTING GRADE
- PROPOSED GRADE
- STORMWATER CONVEYANCE PIPE
- EXFILTRATION TRENCH
- STORMWATER INLET (FDOT DITCH BOTTOM)
- TRIPLE CHAMBER BAFFLE BOX
- STORMWATER FLOW
- STORMWATER MANHOLE
- EXISTING WATER MAIN
- EXISTING SANITARY SEWER LINE
- EXISTING STORM SEWER
- EXISTING BURIED CABLE / TEL.

NOTE: SYMBOLS IN LEGEND ARE NOT TO SCALE



**Water Quantity and Water Quality Calculations**

*Water Quantity - Predevelopment*

Basin Area	A = 1.491 ac	64,933 sf
Pervious Area	0.092 ac	4,017 sf
Impervious Area	1.398 ac	60,916 sf
% Impervious	93.81%	
Rainfall for 25yr/24hr event	P <sub>24</sub> = 9 in	
Rainfall for 25yr/3day event	P <sub>72</sub> = 12.23 in	
Depth to Water Table	6 ft	
Predeveloped Available Storage	8.18 in	
Soil Storage	S = 0.51 in	
Q <sub>pre</sub> = $\frac{(P_{24} - 0.25)^2}{(P_{24} + 0.85)}$	Q <sub>pre</sub> = 11.64 in	
Runoff Volume from 25 year / 3 day storm	V <sub>25yr/24hr</sub> = 17.36 ac-in	

*Water Quantity - Postdevelopment*

Basin Area	A = 1.491 ac	64,933 sf
Pervious Area	0.219 ac	9,547 sf
Impervious Area	1.271 ac	55,386 sf
% Impervious	85.3%	
Rainfall for 25yr/24hr event	P <sub>24</sub> = 9 in	
Rainfall for 25yr/3day event	P <sub>72</sub> = 12.23 in	
Depth to Water Table	7 ft	
Developed Available Storage	8.18 in	
Soil Storage	S = 1.20 in	
Q <sub>post</sub> = $\frac{(P_{24} - 0.25)^2}{(P_{24} + 0.85)}$	Q <sub>post</sub> = 10.90 in	
Runoff Volume from 25 year / 3 day storm	V <sub>25yr/24hr</sub> = 16.24 ac-in	

*Postdevelopment - Predevelopment*

Q <sub>pre-post</sub> = Q <sub>post</sub> - Q <sub>pre</sub>	Q <sub>pre-post</sub> = -0.75 in	
Pre/Post Volume = Q <sub>pre-post</sub> x A	V <sub>pre-post</sub> = -1.11 ac-in	

*Water Quality*

Project Area	1.491 ac	64,933 sf
Surface Water	0.000 ac	0 sf
Roof Area	0.160 ac	6,982 sf
Pavement/Walkways	1.111 ac	48,404 sf
Pervious area	0.219 ac	9,547 sf
Site area for Water Quality (Total area - (water surface + roof area))	1.330 ac	57,951 sf
Impervious area for water quality (Site area for Water Quality - Pervious area)	1.111 ac	48,404 sf
% Impervious	84%	
A) One inch of runoff from project area	1.491 ac-in	
B) 2.5 inches times percent impervious (2.5 x percent impervious x (site area - surface water))	3.113 ac-in	

*Comparison of Water Quality Methods*

1.491 ac-in	<	3.113 ac-in
Pretreatment Volume Required	3.113 ac-in	11,299 cf
Exfiltration Trench Pretreatment Volume Provided	3.125 ac-in	11,344 cf

	8.00	North	South	East	West
FDOT TYPE 'C' INLET DITCH BOTTOM INLET	8.00	-	4.15 (12')	-	-
FDOT TYPE 'D' INLET DITCH BOTTOM INLET	7.65	4.00 (12')	-	-	3.50 (18')
TRIPLE CHAMBER BAFFLE BOX W/ TYPE 'C' GRATE INLET	7.75	-	3.50 (18')	3.50 (18')	3.50 (18')
FDOT TYPE 'D' INLET DITCH BOTTOM INLET	7.75	-	3.50 (18')	3.50 (18')	-
FDOT TYPE 'D' INLET DITCH BOTTOM INLET	7.75	3.50 (18')	-	-	-
FDOT TYPE 'D' INLET DITCH BOTTOM INLET	8.00	3.50 (18')	3.50 (18')	-	-
STORMWATER MANHOLE	9.05	3.50 (18')	3.75 (12')	3.75 (12')	-
FDOT TYPE 'C' INLET DITCH BOTTOM INLET	10.35	-	-	7.50 (6')	4.10 (12')
FDOT TYPE 'C' INLET DITCH BOTTOM INLET	9.45	3.95 (12')	-	4.05 (12')	-
FDOT TYPE 'C' INLET DITCH BOTTOM INLET	9.80	-	-	-	4.40 (12')
TRENCH DRAIN	8.00	-	-	4.00 (12')	-
EXISTING DITCH BOTTOM INLET	7.42	*	*	*	3.90 (12')
FDOT TYPE '9' CURB INLET W/ STRUCT BOT. TYPE J	7.90	(+)1.55 (*)	(+)1.69 (*)	-	-
FDOT TYPE '6' CURB INLET (TOP ONLY)	6.75	-	-	-	-

BE VERIFIED BY CONTRACTOR PRIOR TO ORDERING OF STRUCTURES



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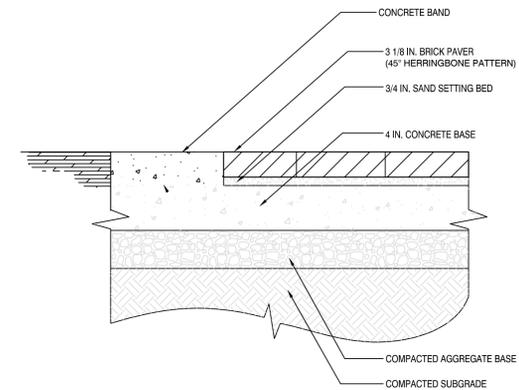
**Submissions:**  
2013.02.15 - Bidding Documents

**FIRE STATION #2**  
616 Simonton Street, Key West, Florida  
**BUILDING AND SITE DEVELOPMENT**  
FOR  
City of Key West, 3132 Flagler Avenue, Key West, Florida 33040

Drawing Size | Project #:  
MK-12060  
Drawn By: | Checked By:

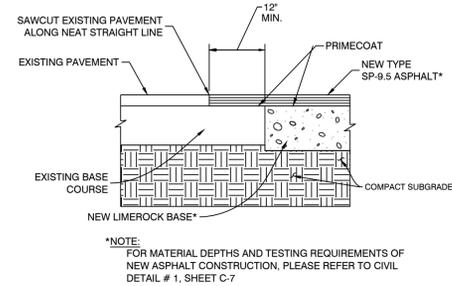
Title:  
CIVIL DETAILS

Sheet Number:  
**C-7**  
Date: February 15, 2013  
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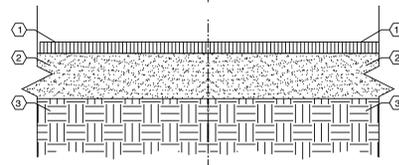
- NOTES:**
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
  2. REFER TO LANDSCAPE DWGS FOR ALL PAVING MATERIALS / LAYOUT NOT DELINEATED IN THIS DETAIL.

**5 Typical Brick Paver Installation: Concrete Base**  
C-7 NTS **BID ALTERNATE**



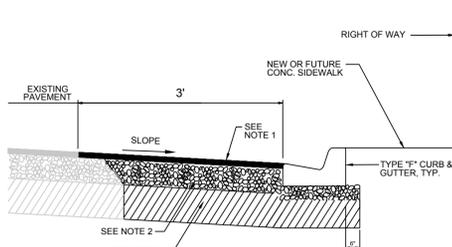
- \*NOTE:**  
FOR MATERIAL DEPTHS AND TESTING REQUIREMENTS OF NEW ASPHALT CONSTRUCTION, PLEASE REFER TO CIVIL DETAIL # 1, SHEET C-7

**4 Pavement Connection to Existing Surface**  
C-7 NTS



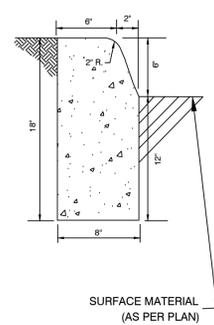
- KEYED NOTES**
1. 2" SP-9.5 STRUCTURAL COURSE OVER PRIME COAT
  2. 6" MIN LIMEROCK BASE COURSE COMPACTED TO 98% ASTM D-1557
  3. 8" SUBGRADE COMPACTED TO 95% OF ASTM D-1557.
- NOTE:**  
PAVEMENT TO BE BUILT IN COMPLIANCE WITH FOOT STANDARDS AND SPECIFICATIONS.

**3 Asphalt Pavement Detail**  
C-7 NTS

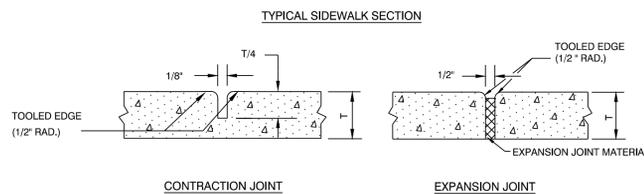
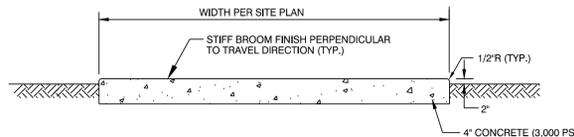


- NOTES:**
1. 2.5" TYPE SP-12.5 ASPHALTIC COURSE
  2. 6" COMPACTED LIMEROCK BASE COURSE, 95% ASTM D-1557.
  3. EXISTING SUBGRADE COMPACTED AND STABILIZED TO 98% MODIFIED PROCTOR VALUE.

**2 Asphalt Repair for Curb Construction**  
C-7 NTS

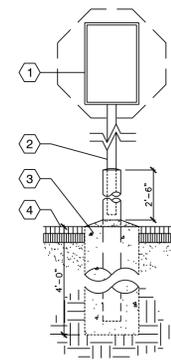


**1 FDOT Type "D" Curb**  
C-7 NTS



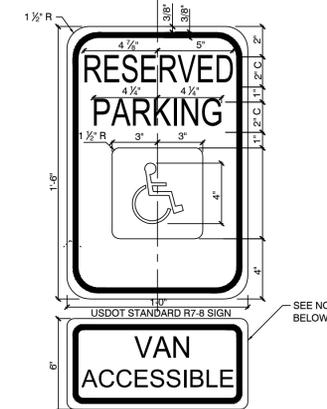
- CONTRACTION JOINT**
- NOTES:**
1. PROVIDE EXPANSION JOINTS WHERE NEW SIDEWALKS ABUT STRUCTURES AND CONTRACTION JOINTS AT INTERVALS EQUAL TO SIDEWALK WIDTH.
  2. REPLACE CONCRETE SIDEWALKS AT SCORED JOINTS TO AVOID A PATCHED APPEARANCE. PROVIDE 2-INCH LEVELING COURSE BENEATH NEW SIDEWALK.

**7 Typical Sidewalk Detail**  
C-7 NTS



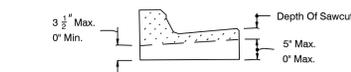
- KEYED NOTES**
1. TRAFFIC DIRECTIONAL SIGN.
  2. 2" x 2" STEEL TUBE EXTENDED INTO CONCRETE FILLED 4" PIPE.
  3. 12" DIA. CONCRETE FOUNDATION (4" MINIMUM BELOW FIN. GRADE)
  4. FINISHED GRADE.

**8 Traffic Directional Sign (Freestanding)**  
C-7 NTS



**NOTE (R7-8 SIGN):** THIS IS A STANDARD SIGN AND MAY BE ORDERED FROM TRAFFIC SIGN SUPPLIER BY NUMBER. THE SIGN MUST BE SUPPLEMENTED WITH A 'VAN ACCESSIBLE' SIGN AS APPLICABLE AND/OR AMOUNT OF THE FINE FOR ILLEGALLY PARKING IN THE RESERVED SPACE(S) A MUNICIPALITY MAY IMPOSE, CONFIRM WITH LOCAL REGULATIONS.

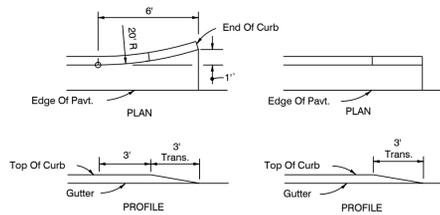
**9 Accessibility Signage**  
C-7 NTS



**CONTRACTION JOINT IN CURB AND GUTTER**

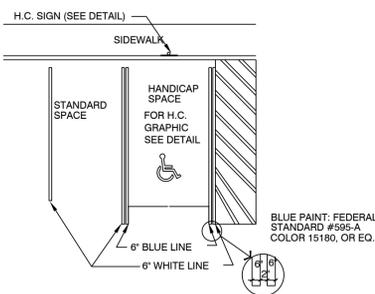
**GENERAL NOTES**

1. For curb, gutter, and curb and gutter provide joints at 10' centers (max.). Contraction joints adjacent to concrete pavement on tangents and flat curves are to match the pavement joints, with intermediate joints not to exceed 10' centers. Curb, gutter and curb & gutter expansion joints shall be located in accordance with FDOT Section 520 of the standard specifications.

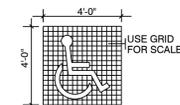


**CONCRETE CURB AND GUTTER**  
**FLARED END** **STRAIGHT END**  
**CURB AND GUTTER TYPES E & F**  
**CURB AND GUTTER ENDINGS**

**6 FDOT Type "F" Curb & Gutter**  
C-7 NTS

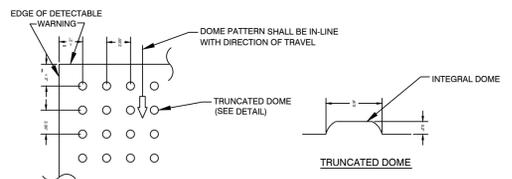


**10 Handicap Parking Details**  
C-7 NTS



- NOTES:**  
ALL LETTERS ARE 1" SERIES "C".  
TOP PORTION OF SIGN SHALL HAVE A REFLECTORIZED BLUE BACKGROUND WITH WHITE REFLECTORIZED LEGEND & BORDER.  
BOTTOM PORTION OF SIGN SHALL HAVE A REFLECTORIZED WHITE BACKGROUND WITH BLACK OPAQUE LEGEND & BORDER.

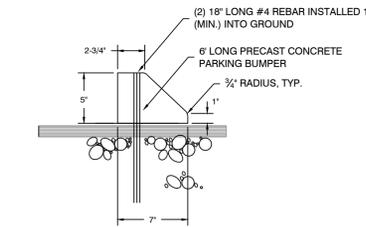
**11 Handicap Graphic Details**  
C-7 NTS



**CURB RAMP DETECTABLE WARNING**  
NTS

- GENERAL NOTE:**
1. CURB RAMP RUNNING SLOPES AT UNRESTRAINED SITES SHALL NOT BE STEEPER THAN 1:12 AND CROSS SLOPE SHALL BE 0.02 OR FLATTER. TRANSITION SLOPES SHALL NOT BE STEEPER THAN 1:12.
  2. CURB RAMP DETECTABLE WARNING SURFACES SHALL EXTEND THE FULL WIDTH OF THE RAMP AND THE FULL RUN OF THE RAMP IN THE DIRECTION OF TRAVEL. DETECTABLE WARNING SURFACES SHALL BE CONSTRUCTED BY TEXTURING A TRUNCATED DOME PATTERN IN CONFORMANCE WITH U.S. DEPARTMENT OF JUSTICE A.D.A. STANDARDS FOR ACCESSIBLE DESIGN, A.D.A. ACCESSIBILITY GUIDELINES, SECTION 4.29.2, TRANSITION SLOPES ARE NOT TO HAVE DETECTABLE WARNINGS.
  3. UNLESS OTHERWISE CALLED OUT IN THE PLANS, THE RAMP DETECTABLE WARNING SURFACE SHALL BE COLORED IN ACCORDANCE WITH FDOT SECTION 351 OF THE STANDARD SPECIFICATIONS.
- DESIGN NOTE:**
1. THE COLOR REQUIREMENT IN GENERAL NOTE 3 IS TO PROVIDE A DARK-ON-LIGHT VISUAL CONTRAST BETWEEN THE DETECTABLE WARNING SURFACE AND THE ADJACENT WALKING SURFACE. WHERE ADJACENT WALKING SURFACES ARE COLORED OR ARE CONSTRUCTED WITH MATERIALS OTHER THAN STANDARD CLASS 1 PORTLAND CEMENT CONCRETE IN ACCORDANCE WITH SECTION 522 OF THE STANDARD SPECIFICATIONS, THE PLANS MUST PROVIDE FOR DETECTABLE WARNING SURFACE COLOR OR MATERIALS THAT PROVIDE THE NECESSARY CONTRAST, EITHER DARK-ON-LIGHT OR LIGHT-ON-DARK.

**12 ADA Detectable Warning & General ADA Notes**  
C-7 NTS



**13 Concrete Parking Bumper Detail**  
C-7 NTS

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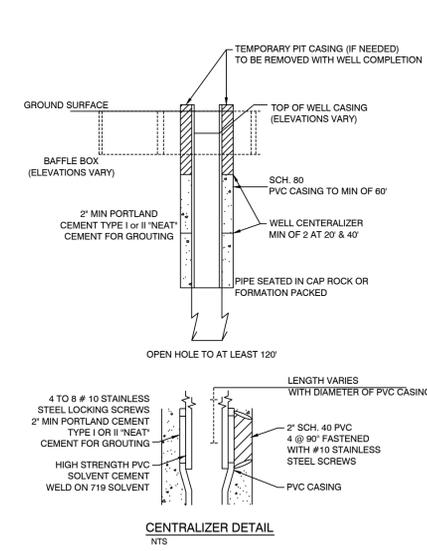
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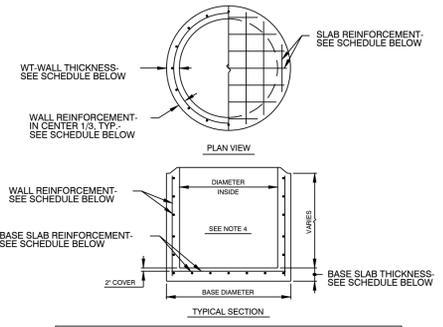
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**C-8**

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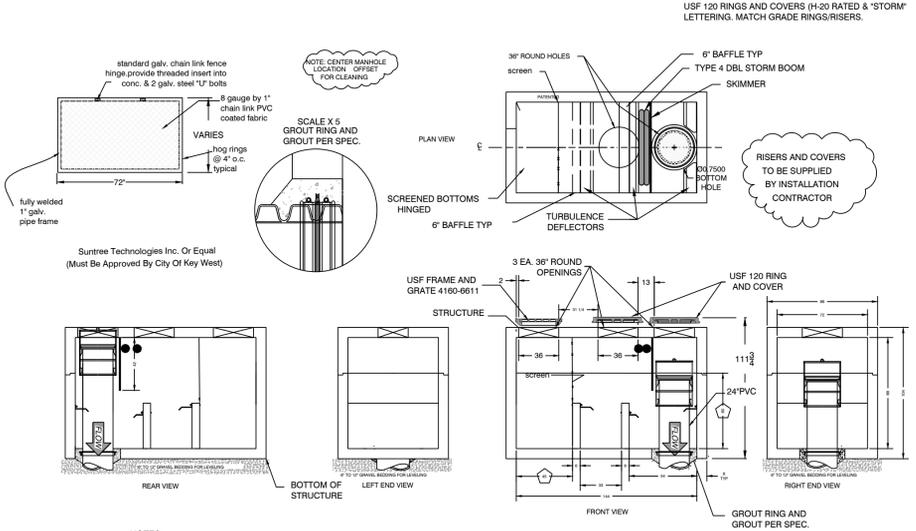
**3 Stormwater Injection Well (Gravity)**  
C-8 NTS



DIAMETER INSIDE	BASE DIAMETER	WT WALL THICKNESS	WALL REINFORCEMENT	BASE SLAB THICKNESS	BASE SLAB REINFORCEMENT
4'	5'-0"	8"	#4 @ 12" EW	8"	#6 @ 12" EW
5'	6'-4"	8"	#4 @ 12" EW	8"	#6 @ 12" EW
6'	7'-4"	8"	#4 @ 12" EW	8"	#6 @ 12" EW
7'	8'-4"	8"	#4 @ 12" EW	8"	#6 @ 12" EW
8'	9'-4"	8"	#4 @ 12" EW	10"	#6 @ 12" EW

NOTES:  
1. FOR GENERAL NOTES, SEE STANDARD DETAIL - STORM STRUCTURE NOTES.  
2. WALL REINFORCEMENT MAY BE WELDED WIRE AS PER ASTM C-478.  
3. MAXIMUM SIZE ALLOWED FOR TYPE I MANHOLE.  
4. ADD 2 #4 REINFORCING BARS AT 3" CENTERS AT THE TOP AND SIDES OF ALL WALL OPENINGS.

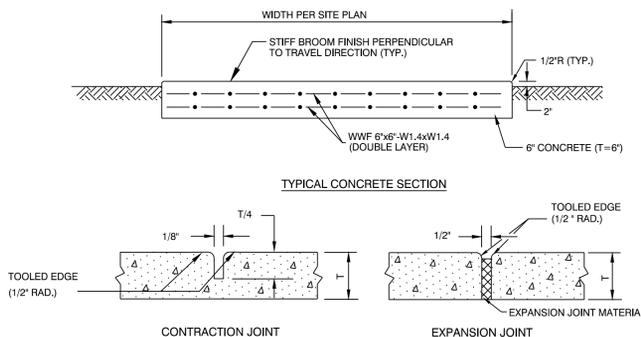
**4 Type I and II Manhole Base and Wall Detail**  
C-8 NTS



NOTES:  
1. CONCRETE 28 DAY COMPRESSIVE STRENGTH  $f_c = 5,000$  PSI.  
2. REINFORCING, ASTM A-615, GRADE 60.  
3. SUPPORTS AN H20 LOADING AS INDICATED BY AASHTO.  
4. JOINT SEALANT: BUTYL RUBBER SS-S-00210

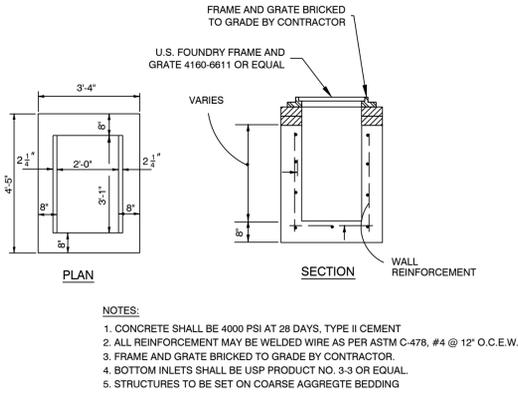
5. ALL WALLS, TOP + BOTTOM ARE 8" THICK.  
6. STEEL EMBEDDED IN CONCRETE 3" MINIMUM FROM EDGE.  
7. GROUTING RING TO BE SUPPLIED BY INSTALL CONTRACTOR.  
8. DIMENSIONS PENTAGON BLOCK ARE CRITICAL DIMENSIONS.  
9. FRAMES & GRATE, WHEN REQUIRED, SHALL BE USF 4160-6611 - GALVANIZED COATED

**2 Typical Triple Chamber Baffle Box with Injection Well (Gravity)**  
C-8 NTS

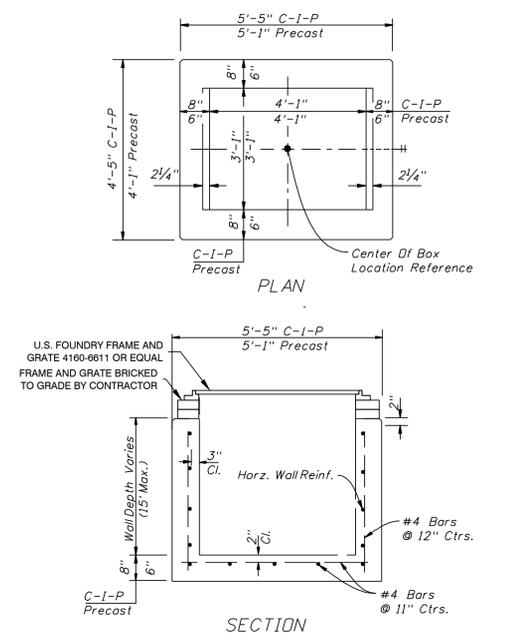


NOTES:  
• MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF SECTION 350 OF FDOT SPECIFICATIONS.  
• BASE MATERIAL: 8" CRUSHED LIMESTONE WITH A MIN. LBR OF 100 COMPACTED TO ASTM D-1557  
• SUB-BASE: 12" STABILIZED WITH A MIN. LBR 40 COMPACTED TO 95% OF THE MODIFIED PROCTOR MAX. DRY DENSITY.

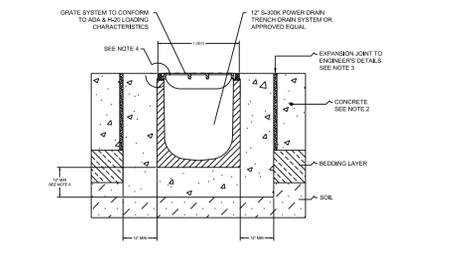
**1 6 inch Concrete Pavement Detail**  
C-8 NTS



**5 Type "C" Ditch Bottom Inlet**  
C-8 NTS

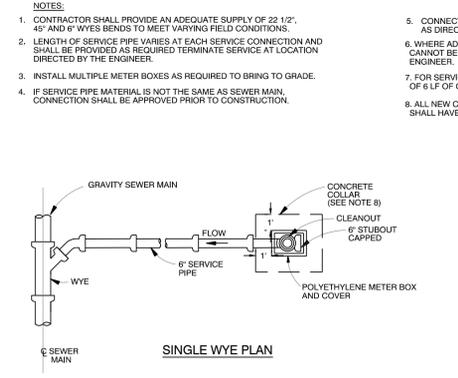


**6 FDOT Type "D" Ditch Bottom Inlet**  
C-8 NTS



TRENCH DRAIN GENERAL NOTES:  
1. It is necessary to ensure the minimum dimensions shown are suitable for the existing ground conditions.  
2. A minimum concrete strength of 3000 PSI is recommended. The concrete should be vibrated to eliminate air pockets.  
3. Expansion and crack control joints are recommended to protect the channel and the concrete surround.  
4. The finished level of the concrete surround must be approx. 1/8" above the top of the channel edge.  
5. Refer to ACO's latest installation instructions for complete details.  
6. Concrete base thickness should match slab thickness.

**7 Trench Drain Detail**  
C-8 NTS



**8 Typical Sewer Service Connection Detail**  
C-8 NTS



**EROSION AND SEDIMENT CONTROL NOTES**

- THE CONTRACTOR IS RESPONSIBLE FOR REMOVING SILT FROM SITE IF NOT REUSABLE ON-SITE AND ASSURING PLAN ALIGNMENT AND GRADE IN ALL DITCHES AND SWALES AT COMPLETION OF CONSTRUCTION.
- THE SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED.
- ADDITIONAL PROTECTION - ON-SITE PROTECTION MUST BE PROVIDED THAT WILL NOT PERMIT SILT TO LEAVE THE PROJECT CONFINES DUE TO UNFORSEEN CONDITIONS OR ACCIDENTS.
- CONTRACTOR SHALL INSURE THAT ALL DRAINAGE STRUCTURES, PIPES, ETC., ARE CLEANED OUT AND WORKING PROPERLY AT TIME OF ACCEPTANCE.
- IF THE HAYBALES/ ROCK BAGS BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE MATERIALS MUST BE PULLED AWAY FROM THE INLET, CLEANED AND REPLACED.
- BALES SHALL BE EITHER WIRE-BOUND OR STRING-TIED WITH THE BINDINGS ORIENTED AROUND THE SIDES RATHER THAN OVER AND UNDER THE BALES.
- BALES SHALL BE PLACED LENGTHWISE IN SINGLE ROW SURROUNDING THE INLET, WITH THE ENDS OF ADJACENT BALES PRESSED TOGETHER.
- THE FILTER BARRIER SHALL BE ENTRENCHED AND BACK FILLED. A TRENCH SHALL BE EXCAVATED AROUND THE INLET AND WIDTH OF A BALE TO A MINIMUM DEPTH OF FOUR INCHES. AFTER THE BALES ARE STACKED, THE EXCAVATED SOIL SHALL BE BACK FILLED AND COMPACTED AGAINST THE FILTER BARRIER.
- EACH BALE SHALL BE SECURELY ANCHORED AND HELD IN PLACE BY AT LEAST TWO STAKES OR REBAR'S DRIVEN THROUGH THE BALE A MINIMUM OF 2 FEET INTO THE GROUND.
- LOOSE STRAW SHALL BE WEDGED BETWEEN BALES TO PREVENT WATER FROM ENTERING BETWEEN BALES.
- HAY BALE BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH 1/2 INCH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
- CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED BALES, END RUNS AND UNDERCUTTING BENEATH BALES.
- NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF BALES SHALL BE ACCOMPLISHED PROMPTLY.
- SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL. THEY MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES 1 FOOT OR APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
- ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE HAY BALE BARRIER IS NO LONGER REQUIRED SHALL BE REMOVED. THE AREA SHALL BE DRESSED TO CONFORM TO THE FINISH GRADE, PREPARED AND SEEDED.
- ALL FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
- SHOULD THE FABRIC ON A FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE PROJECT THE SILT FENCE OR FILTER BARRIER SHALL BE REPLACED PROMPTLY.
- THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
- SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE INCH IN ADDITION TO THE REQUIREMENTS SHOWN HERE.

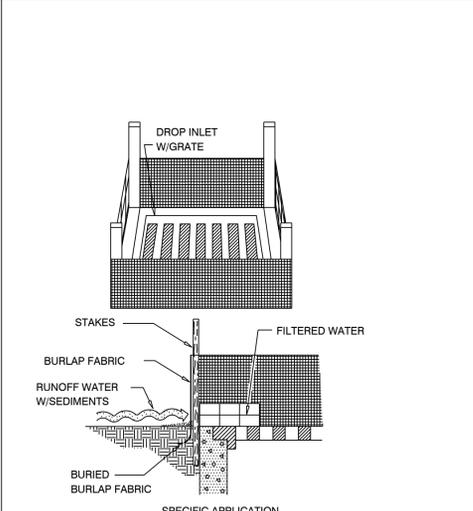
- ALL TEMPORARY, EROSION, AND SEDIMENT CONTROL TO REMAIN IN PLACE UNTIL COMPLETION OF CONSTRUCTION.
- IN ADDITION TO THE MINIMUM EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE PLANS THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL APPLICABLE RULES, REGULATIONS AND WATER QUALITY GUIDELINES AND SHALL UTILIZE ALL ADDITIONAL CONTROLS NECESSARY FOR COMPLIANCE.
- ALL EXCAVATIONS AND EARTHWORK SHALL BE DONE IN A MANNER TO MINIMIZE WATER TURBIDITY AND POLLUTION. DISCHARGE SHALL BE CONTROLLED AND REROUTED THROUGH HAY FILTERS, SILTATION DIAPERS, SLUMPS AND POLISHING PONDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREVENTION, CORRECTION, CONTROL AND ABATEMENT OF EROSION AND WATER POLLUTION IN ACCORDANCE WITH THE REQUIREMENTS OF THE BAHAMAS AND THE ENVIRONMENTAL MANAGEMENT PLAN AND ENVIRONMENTAL IMPACTS ASSESSMENT FOR THIS PROJECT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ANY SEDIMENT THAT LEAVES THE SITE AND CHANGES ANY DOWNSTREAM CONDITIONS BY RAISING CHANNEL BOTTOMS AND/OR CLOGGING OUTFALL CULVERTS.
- THE CONTRACTOR SHALL PAY FOR ANY WATER QUALITY CONTROL VIOLATIONS FROM ANY AGENCY THAT RESULTS IN FINES BEING ASSESSED TO THE OWNER BECAUSE OF THE CONTRACTOR'S FAILURE TO ELIMINATE TURBID RUNOFF FROM LEAVING THE SITE AND RAISING TURBIDITY LEVELS ABOVE EXISTING BACKGROUND LEVEL.

**EROSION AND SEDIMENT CONTROL GENERAL NOTE:**

THE ATTACHED BEST MANAGEMENT PRACTICES (BMP'S) DETAILS AND SPECIFICATIONS ARE ONLY A SUGGESTED APPROACH DEVELOPED FOR USE BY THE OWNER/CONTRACTOR TO ASSIST THEM IN IMPLEMENTING APPROPRIATE POLLUTION PREVENTION TECHNIQUES.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE AND IMPLEMENT THE BEST MANAGEMENT PRACTICES THAT ARE APPROPRIATE FOR THE PROJECTS SITE SPECIFIC CONDITIONS DURING THE LIFE OF THE CONSTRUCTION ACTIVITIES.

**CONTRACTOR SHALL SUBMIT AN EROSION AND SEDIMENT CONTROL PLAN FOR APPROVAL BY THE CITY OF KEY WEST PRIOR TO BEGINNING CONSTRUCTION**

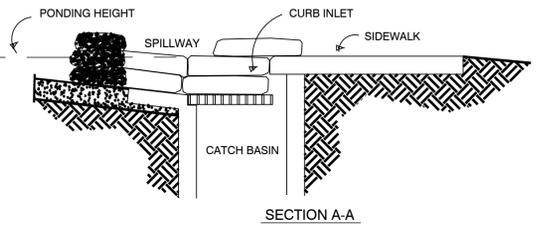
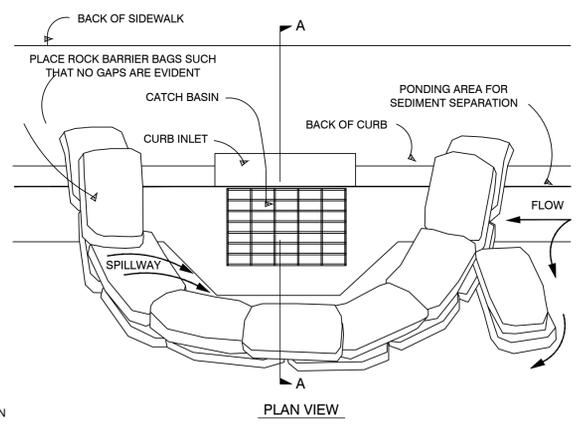


**1 Drop Inlet Sediment Filter**  
C-10 NTS

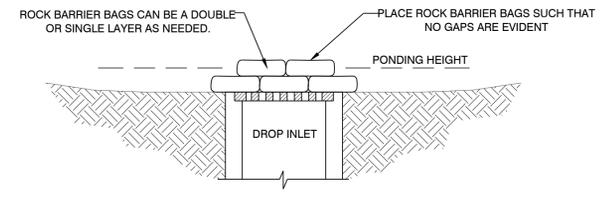
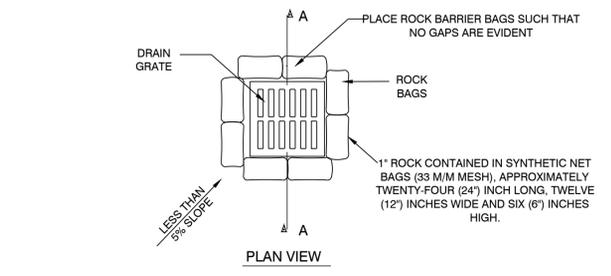
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT NON PAVED AREA (SLOPES NO GREATER THAN 5%) WHERE SHEET OR OVERLAND FLOWS ( NOT EXCEEDING 0.5 CFS ) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS ALONG ROADWAYS.

- THE CONTRACTOR IS RESPONSIBLE FOR THE BEST EROSION AND SEDIMENT CONTROL PRACTICES AS OUTLINED IN THE PLANS, SPECIFICATIONS AND THE ENVIRONMENTAL MANAGEMENT PLAN (E.M.P.) IN THE ENVIRONMENTAL IMPACT ANALYSIS (E.I.A.) FOR THIS PROJECT.
- EROSION AND SEDIMENT CONTROL BARRIERS SHALL BE PLACED ADJACENT TO ALL WATER BODIES AND WETLAND AREAS, WITHIN 200 FT. OF THE CONSTRUCTION LIMITS AND FARTHER WHERE THERE IS POTENTIAL FOR DOWNSTREAM WATER QUALITY DEGRADATION.
- ALL DISTURBED AREAS THAT WILL REMAIN UNPAVED SHALL BE GRASSED, FERTILIZED, MULCHED AND MAINTAINED UNTIL COMPLETION OF THE PROJECT (UNTIL FURTHER VEGETATIVE COVER IS ESTABLISHED FOR AREAS TO RECEIVE FURTHER LANDSCAPING).
- ALL DISCHARGE FROM DE WATERING ACTIVITY SHALL BE FILTERED AND CONVEYED TO THE SEWER SYSTEM IN A MANNER WHICH PREVENTS EROSION AND TRANSPORTATION OF SUSPENDED SOLIDS TO THE RECEIVING OUTFALL.
- CONTRACTOR SHALL PHOTOGRAPH ALL PROTECTION MEASURES ON (3) SEPARATE OCCASIONS, EQUALLY SPREAD OVER A (12) MONTH PERIOD & SUBMIT W/ FGBC DOCUMENTATION.

- NOTES:**
- ALL ROCK BAG BARRIERS MUST AGREE WITH THE NOTES ON PREVIOUS PAGE.
  - PLACE CURB TYPE ROCK BAG BARRIER ON GENTLY SLOPING STREET, WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.
  - BAGS OF WOVEN GEOTEXTILE FABRIC, FILLED WITH GRAVEL MUST BE LAYERED SUCH THAT NO GAPS ARE EVIDENT.
  - LEAVE ONE SANDBAG GAP IN THE TOP ROW ON THE SIDE AWAY FROM FLOW, TO PROVIDE A SPILLWAY; OR IN THE CENTER IF PONDING IS NEEDED ON BOTH SIDES.
  - INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT. SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.
  - CONTRACTOR SHALL PHOTOGRAPH ALL PROTECTION MEASURES ON (3) SEPARATE OCCASIONS, EQUALLY SPREAD OVER A (12) MONTH PERIOD & SUBMIT W/ FGBC DOCUMENTATION.

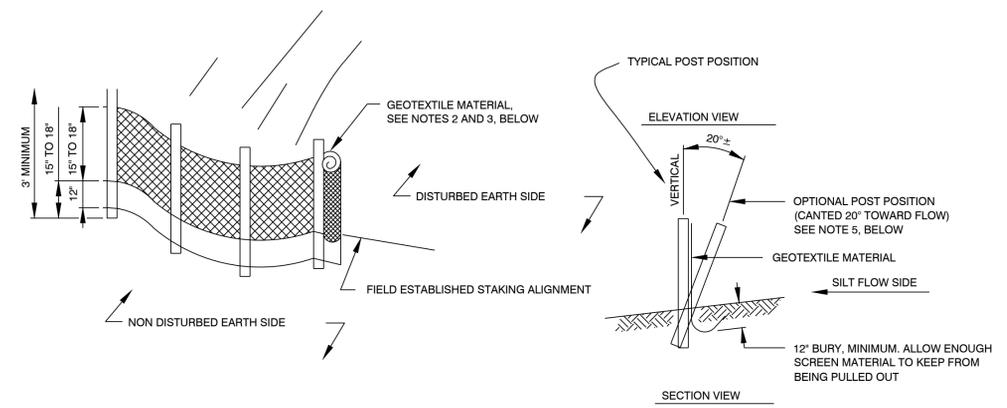


**2 Silt Rock Bag Curb Inlet Filter**  
C-10 NTS



- NOTES:**
- DROP INLET SEDIMENT BARRIERS ARE TO BE USED FOR SMALL, NEARLY LEVEL DRAINAGE AREAS. (LESS THAN 5%).
  - A "REASONABLE" DESIGN SIZE PARTICLE TO CAPTURE MUST BE SELECTED.
  - SIZE DISTRIBUTION OF UPSTREAM SOIL PARTICLES MUST BE EVALUATED.
  - INFLOW AND OUTFLOW FROM THE SYSTEM FOR A SPECIFIC FREQUENCY STORM MUST BE KNOWN.
  - POND VOLUME IS DIRECTLY PROPORTIONAL TO THE DISCHARGE RATE OF WATER FROM THE SYSTEM.
  - POND VOLUME IS INVERSELY PROPORTIONAL TO THE MASS OF THE DESIGN SIZE SUSPENDED PARTICLE.
  - A SYSTEM MUST PROVIDE SUFFICIENT FLOW TO ALLOW FOR DEPOSITION OF DESIGN SIZE PARTICLES.
  - THE PONDING HEIGHT MUST BE WELL BELOW THE GROUND ELEVATION DOWNSLOPE TO PREVENT RUNOFF FROM BYPASSING THE INLET. A TEMPORARY DIKE MAY BE NECESSARY ON THE DOWNSLOPE SIDE OF THE STRUCTURE.
  - CONTRACTOR SHALL PHOTOGRAPH ALL PROTECTION MEASURES ON (3) SEPARATE OCCASIONS, EQUALLY SPREAD OVER A (12) MONTH PERIOD & SUBMIT W/ FGBC DOCUMENTATION.

**3 Silt Rock Bag Drop Inlet Filter**  
C-10 NTS



- NOTES:**
- POST: 2"x2" WOOD, P.T. OR 2-1/2"x2" STEEL AT 6' CENTERS, MAXIMUM.
  - GEOTEXTILE: GRAB TENSILE AT 90 LBS, TRAPEZOIDAL TEAR AT 35 LBS., MULLEN BURST AT 180 PSI.
  - GEOTEXTILE MATERIAL SHALL BE BURIED IN THE GROUND A MINIMUM OF 12" AND BACK FILLED.
  - ALSO SEE FDOT INDEX 199, "GEOTEXTILE CRITERIA", EROSION CLASS.
  - OPTIONAL POST POSITION REQUIRED WHEN SLOPE IS GREATER THAN 1:2.

**4 Staked Silt Barrier Detail**  
C-10 NTS

Seal:

**Consultants:**

**STRUCTURAL ENGINEER:**  
TKW Consulting Engineers  
5621 Banner Drive,  
Fort Myers, Florida 33912

**CIVIL ENGINEER:**  
Perez Engineering & Development, Inc.  
1010 Kennedy Dr., Suite 201  
Key West, Florida 33040

**MEP / FP ENGINEER:**  
TLC Engineering for Architecture  
1400 Colonial Boulevard, Suite 203  
Fort Myers, Florida 33907

**LANDSCAPE ARCHITECT:**  
Landscape Architecture, LLC  
2525 Ponce de Leon Blvd., Suite 300  
Coral Gables, Florida 33134

**Submissions:**

2013.02.15 - Bidding Documents

Drawing Size	Project #
Drawn By:	Checked By:

Seal:

Consultants:  
STRUCTURAL ENGINEER:  
TKW Consulting Engineers  
5921 Banner Drive,  
Fort Myers, Florida 33907  
CIVIL ENGINEER:  
Perez Engineering & Development, Inc.  
1010 Kennedy Dr., Suite 201  
Key West, Florida 33040  
MEP/FP ENGINEER:  
TLC Engineering for Architecture  
1400 Colonial Boulevard, Suite 203  
Fort Myers, Florida 33907  
LANDSCAPE ARCHITECT:  
Landscape Architecture, LLC  
2525 Porco de Leon Blvd., Suite 300  
Coral Gables, Florida 33134

Submissions:  
2013.02.15 - Bidding Documents

**FIRE STATION #2**  
616 Simonton Street, Key West, Florida  
**BUILDING AND SITE DEVELOPMENT**  
FOR  
City of Key West, 3132 Flagler Avenue, Key West, Florida 33040

Drawing Size: Project #:  
MK-12060  
Drawn By: Checked By:  
EN / JV EN

Title:  
**EXISTING TREE DISPOSITION PLAN**

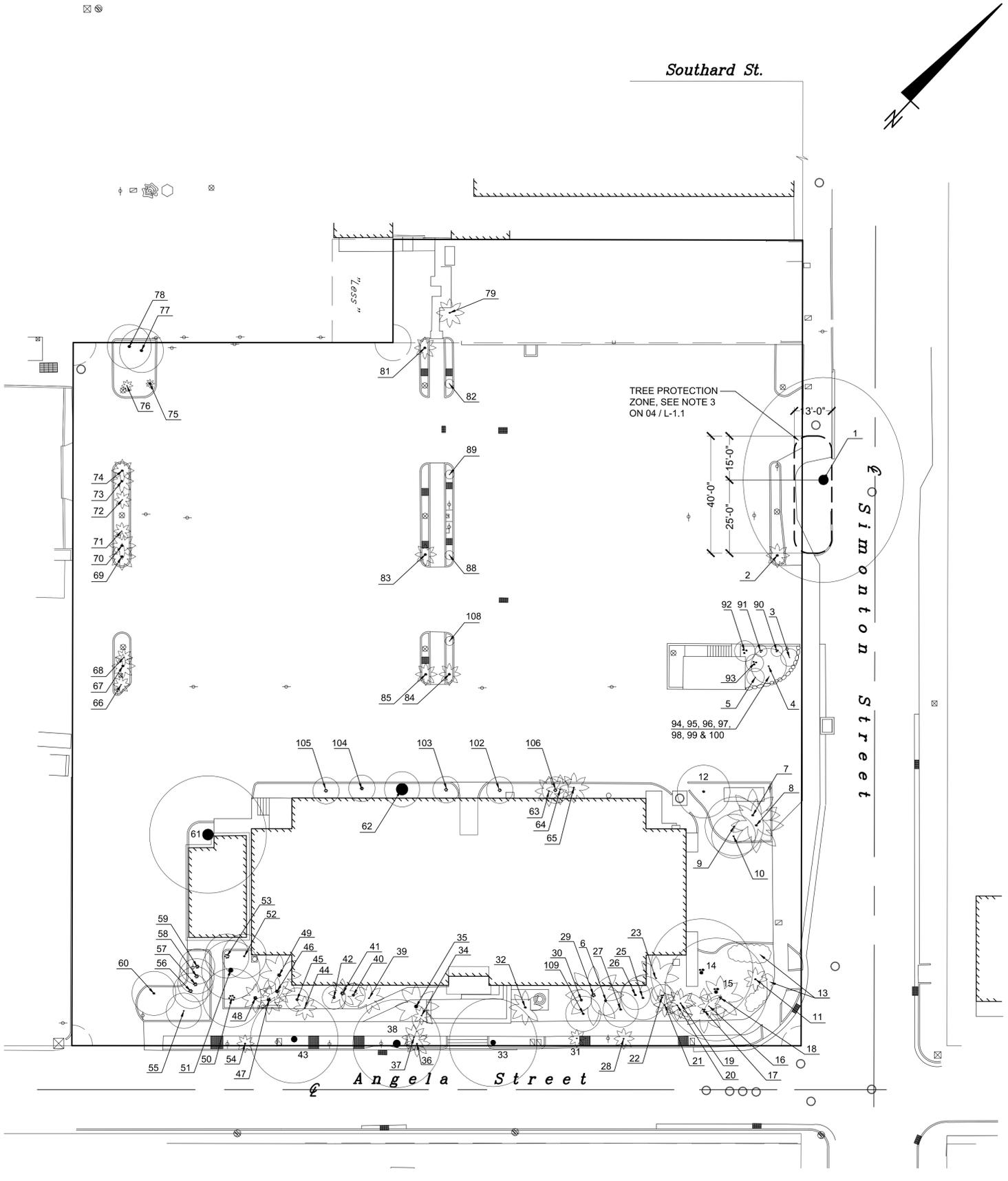
Sheet Number:

**L-1.0**

Date: February 15, 2013  
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NUMBER	BOTANICAL NAME	COMMON NAME	HEIGHT	SPREAD	CALIPER	CONDITION	STATUS
1	Swietenia mahagoni	Mahogany	60'	70' x 55'	40"	Specimen	Remain
2	Sabal palmetto	Palmetto	12'	8'	8"	Good	Remove
3	Bourreria ovata	Strong Bark	10'	6'	1 1/2"	Good	Remove
4	Lysiloma latisiliqua	Wild Tamarind	12'	12'	3 1/2"	Good	Remove
5	Bourreria ovata	Strong Bark	10'	6'	1 1/2"	Good	Remove
6	Codiaeum variegatum	Croton	15'	10'	Multi	Fair	Remove
7	Cocos nucifera	Coconut	20'	18'	7"	Good	Remove
8	Cocos nucifera	Coconut	20'	18'	7"	Good	Remove
9	Ficus	Fig	20'	20'	4 1/2"	Fair	Remove
10	Not Identified		20'	15'	4 1/2"	Fair	Remove
11	Adonia merillii	Christmas Palm	20'	8'	6"	Fair	Remove
12	Dracaena marginata	Dracaena	20'	18'	8" Multi	Poor	Remove
13	Capparis cynophallophora	Jamaican Caper	5'	5'	2" Multi	Poor/Hedged	Remove
14	Clusia rosea	Autograph Tree	20'	35'	6"-12" Multi	Poor	Remove
15	Clusia rosea	Autograph Tree	20'	35'	8" Multi	Poor	Remove
16	Thrinax radiata	Thatch Palm	5'	8'	3"	Good	Remove
17	Thrinax radiata	Thatch Palm	20'	15'	4" Multi	Fair	Remove
18	Thrinax radiata	Thatch Palm	20'	15'	5" & 4" Multi	Fair	Remove
19	Thrinax radiata	Thatch Palm	20'	10'	4"	Fair	Remove
20	Thrinax radiata	Thatch Palm	20'	10'	4"	Fair	Remove
21	Thrinax radiata	Thatch Palm	5'	8'	2"	Good	Remove
22	Codiaeum variegatum	Croton	10'	8'	Multi	Fair	Remove
23	Thrinax radiata	Thatch Palm	15'	15'	4"	Fair	Remove
24	Not Applicable						
25	Bursera simarouba	Gumbo Limbo	18'	15'	3 1/2"	Good	Remove
26	Myrcianthes fragrans	Simpson Stopper	18'	10'	3 1/2"	Good	Remove
27	Swietenia mahagoni	Mahogany	18'	12'	3 1/2"	Good	Remove
28	Thrinax radiata	Thatch Palm	6'	7'	4"	Good	Remove
29	Ptychosperma macarthuri	McArthur Palm	25'	20'	2" Multi	Poor/Leggy	Remove
30	Codiaeum variegatum	Croton	15'	7'	Multi	Fair	Remove
31	Thrinax radiata	Thatch Palm	6'	6'	3 1/2"	Good	Remove
32	Dypsis lastelliana	Teddy Bear Palm	30'	12'	7"	Good	Remove
33	Delonix regia	Poinciana	50'	30'	20"	Poor	Remove
34	Thrinax radiata	Thatch Palm	5'	6'	3"	Good	Remove
35	Sabal palmetto	Palmetto	30'	15'	13"	Good	Remove
36	Ptychosperma elegans	Alexander Palm	30'	9'	3 1/2"	Fair	Remove
37	Ptychosperma elegans	Alexander Palm	30'	9'	3 1/2"	Fair	Remove
38	Delonix regia	Poinciana	50'	30'	30"	Poor	Remove
39	Ptychosperma elegans	Alexander Palm	45'	10'	4"	Poor/Leggy	Remove
40	Murraya paniculata	Jasmine	10'	8'	2" Multi	Fair	Remove
41	Ptychosperma elegans	Alexander Palm	20'	10'	3" Multi	Fair	Remove
42	Murraya paniculata	Jasmine	10'	8'	3" Multi	Fair	Remove
43	Delonix regia	Poinciana	50'	30'	24"	Poor	Remove
44	Thrinax radiata	Thatch Palm	6'	8'	3"	Good	Remove
45	Codiaeum variegatum	Croton	12'	8'	Multi	Fair	Remove
46	Thrinax radiata	Thatch Palm	20'	10'	4" Multi	Fair	Remove
47	Thrinax radiata	Thatch Palm	20'	10'	4" Multi	Fair	Remove
48	Thrinax radiata	Thatch Palm	12'	10'	5" Multi	Fair	Remove
49	Thrinax radiata	Thatch Palm	30'	15'	4" Multi	Fair	Remove
50	Dracaena marginata	Dracaena	20'	20'	7" Multi	Poor	Remove
51	Erythrina herbacea	Coral Bean	50'	20'	18"	Fair/Leggy	Remove
52	Capparis cynophallophora	Jamaican Caper	20'	15'	6"	Fair	Remove
53	Capparis cynophallophora	Jamaican Caper	20'	15'	2 1/2" Multi	Fair	Remove
54	Thrinax radiata	Thatch Palm	5'	6'	5"	Good	Remove
55	Not Identified		8'	12'	3"	Poor	Remove
56	Capparis cynophallophora	Jamaican Caper	20'	12'	6" Multi	Fair	Remove
57	Capparis cynophallophora	Jamaican Caper	20'	12'	4" Multi	Fair	Remove
58	Capparis cynophallophora	Jamaican Caper	15'	12'	5" Multi	Poor	Remove
59	Capparis cynophallophora	Jamaican Caper	15'	12'	2" Multi	Poor	Remove
60	Capparis cynophallophora	Jamaican Caper	15'	15'	7"	Fair	Remove
61	Peltophorum pterocarpum	Yellow Poinciana	50'	40'	45"	Poor	Remove
62	Large Tree Stump		12'	12'	48"	Poor	Remove
63	Ptychosperma elegans	Alexander Palm	30'	10'	3"	Fair	Remove
64	Ptychosperma elegans	Alexander Palm	20'	10'	3"	Fair	Remove
65	Ptychosperma elegans	Alexander Palm	15'	10'	3"	Fair	Remove
66	Thrinax morrisii	Key Thatch Palm	5'	6'	3"	Good	Remove
67	Sabal palmetto	Palmetto	12'	8'	8"	Good	Remove
68	Thrinax morrisii	Key Thatch Palm	5'	6'	3"	Good	Remove
69	Sabal palmetto	Palmetto	15'	9'	8"	Good	Remove
70	Sabal palmetto	Palmetto	16'	9'	10"	Good	Remove
71	Thrinax morrisii	Key Thatch Palm	4'	6'	3"	Good	Remove
72	Thrinax morrisii	Key Thatch Palm	4'	6'	3"	Good	Remove
73	Sabal palmetto	Palmetto	16'	8'	9"	Good	Remove
74	Sabal palmetto	Palmetto	14'	8'	8"	Good	Remove
75	Sabal palmetto	Palmetto	10'	3'	9"	Fair	Remove
76	Thrinax morrisii	Key Thatch Palm	4'	4'	2"	Good	Remove
77	Citrus aurantium	Sour Orange	15'	15'	10"	Poor	Remove
78	Tecoma stans	Yellow Elder	18'	15'	10"	Poor	Remove
79	Adonia merillii	Christmas Palm	18'	10'	5"	Fair	Remove
80	Not Applicable						
81	Sabal palmetto	Palmetto	15'	8'	8"	Good	Remove
82	Eugenia foetida	Spanish Stopper	6'	3'	1 1/2"	Good	Remove
83	Sabal palmetto	Palmetto	15'	8'	8"	Good	Remove
84	Sabal palmetto	Palmetto	15'	8'	8"	Good	Remove
85	Sabal palmetto	Palmetto	12'	8'	9"	Good	Remove
86	Not Applicable						
87	Not Applicable						
88	Eugenia foetida	Spanish Stopper	10'	3'	1 1/2"	Good	Remove
89	Eugenia foetida	Spanish Stopper	6'	3'	1"	Good	Remove
90	Eugenia rhombica	Red Stopper	6'	4'	1" Multi	Good	Remove
91	Eugenia foetida	Spanish Stopper	8'	4'	1" Multi	Good	Remove
92	Bourreria cassiniifolia	Little Strongbark	4'	7'	1" Multi	Good	Remove
93	Calyptanthus pallens	Spicewood	7'	6'	1" Multi	Good	Remove
94	Serenoa repens	Saw Palmetto	3'	3'	NA	Good	Remove
95	Canella winterana	Wild Cinnamon	7'	4'	1"	Good	Remove
96	Coccothrinax argentata	Silver Palm	2'	2'	2"	Good	Remove
97	Lantana depressa	White Lantana	3'	4'	Multi	Good	Remove
98	Psychotria ligustrifolia	Dwarf Wild Coffee	3'	3'	Multi	Good	Remove
99	Zamia pumila	Coontie	3'	3'	NA	Good	Remove
100	Eugenia confusa	Red Berry Stopper	7'	4'	1" Multi	Good	Remove
101	NA						
102	Codiaeum variegatum	Croton	15'	9'	Multi	Fair	Remove
103	Codiaeum variegatum	Croton	15'	9'	Multi	Fair	Remove
104	Codiaeum variegatum	Croton	15'	9'	Multi	Fair	Remove
105	Codiaeum variegatum	Croton	15'	9'	Multi	Fair	Remove
106	Codiaeum variegatum	Croton	15'	9'	Multi	Fair	Remove
107	NA						
108	Eugenia foetida	Spanish Stopper	8'	3'	1 1/2"	Good	Remove
109	Murraya paniculata	Jasmine	12'	12'	6"	Fair	Remove

All Shrubs/Vegetation/Stumps Not Shown On This Schedule Are To Be Removed



NOTES:  
Tree #1 Swietenia mahagoni scheduled to remain may pose risks due to age, condition and location. The General Contractor is responsible for obtaining the advice of an International Society of Arboriculture Certified Arborist regarding the condition of the tree and shall provide any tree care that may be needed to mitigate risks prior to construction commencing.

01 TREE DISPOSITION LIST  
SCALE: N.T.S.

02 EXISTING TREE DISPOSITION PLAN  
SCALE: 1"=10'-0"