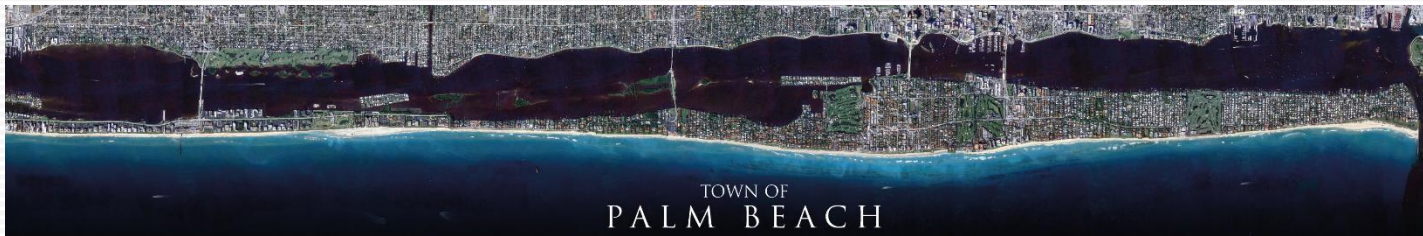




TOWN OF PALM BEACH

Town-Wide Undergrounding of Utilities Program

Master Plan Draft Document



TOWN-WIDE *Undergrounding of Utilities* MASTER PLAN



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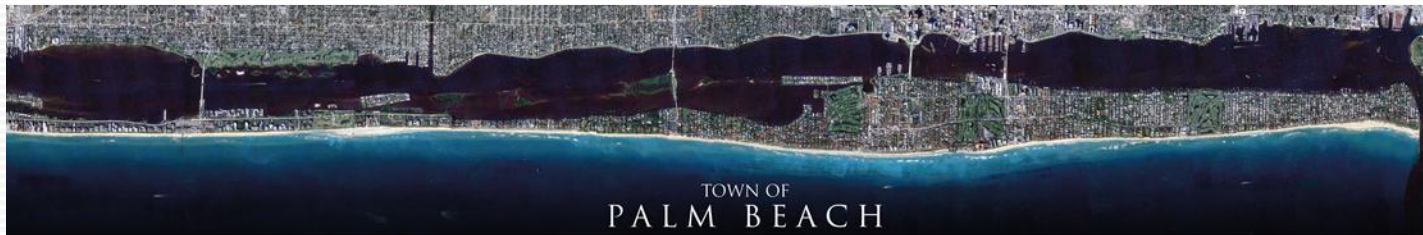


TOWN OF PALM BEACH

Town-Wide Undergrounding of Utilities Program

Master Plan Draft Document

Accomplishments



TOWN-WIDE

Undergrounding of Utilities

MASTER PLAN



Kimley»Horn



Master Plan Draft Document

Accomplishments – TEAMWORK!

- 35 Kimley-Horn Staff Members
- 4 Specialty Subconsultants
- 3 Utility Owners
- 6 Public Infrastructure Stakeholders
- 9 Town of Palm Beach Departments
- UUTF, Mayor and Town Council
- Numerous Individuals and Community Groups



Master Plan Draft Document

Accomplishments – TECHNICAL

- 37 Miles of Overhead Infrastructure
- Over 1,000,000 LF of Conduit
- Nearly 2,000 poles
- Multiple Infrastructure Programs Coordinated and Sequenced
- Implementation Plans Assembled
- Cost and Schedule Opinions Developed



Master Plan Draft Document

Contents

- Twelve Chapters
- Process Description
- Recommendations
- Guide for Program Implementation



Master Plan Draft Document

Chapter 1 – Executive Summary





Master Plan Draft Document

Chapter 2 – Introduction and Project Goals





Master Plan Draft Document

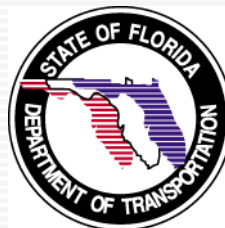
Chapter 3 – Existing System Overview





Master Plan Draft Document

Chapter 4 – Data Collection





Master Plan Draft Document

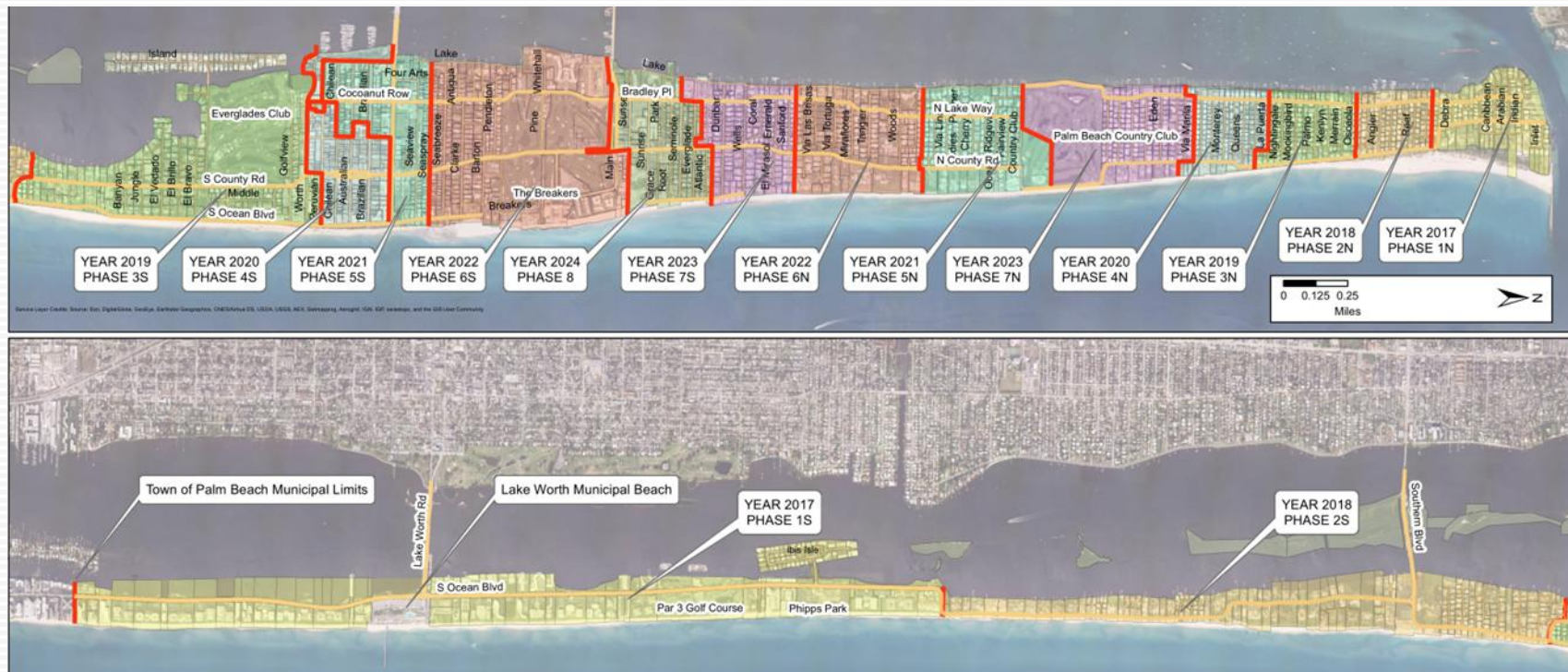
Chapter 5 – Design Criteria and Conceptual Design Description





Master Plan Draft Document

Chapter 6 – Phasing and Sequencing





Master Plan Draft Document

Chapter 7 – Project Delivery Methods





Master Plan Draft Document

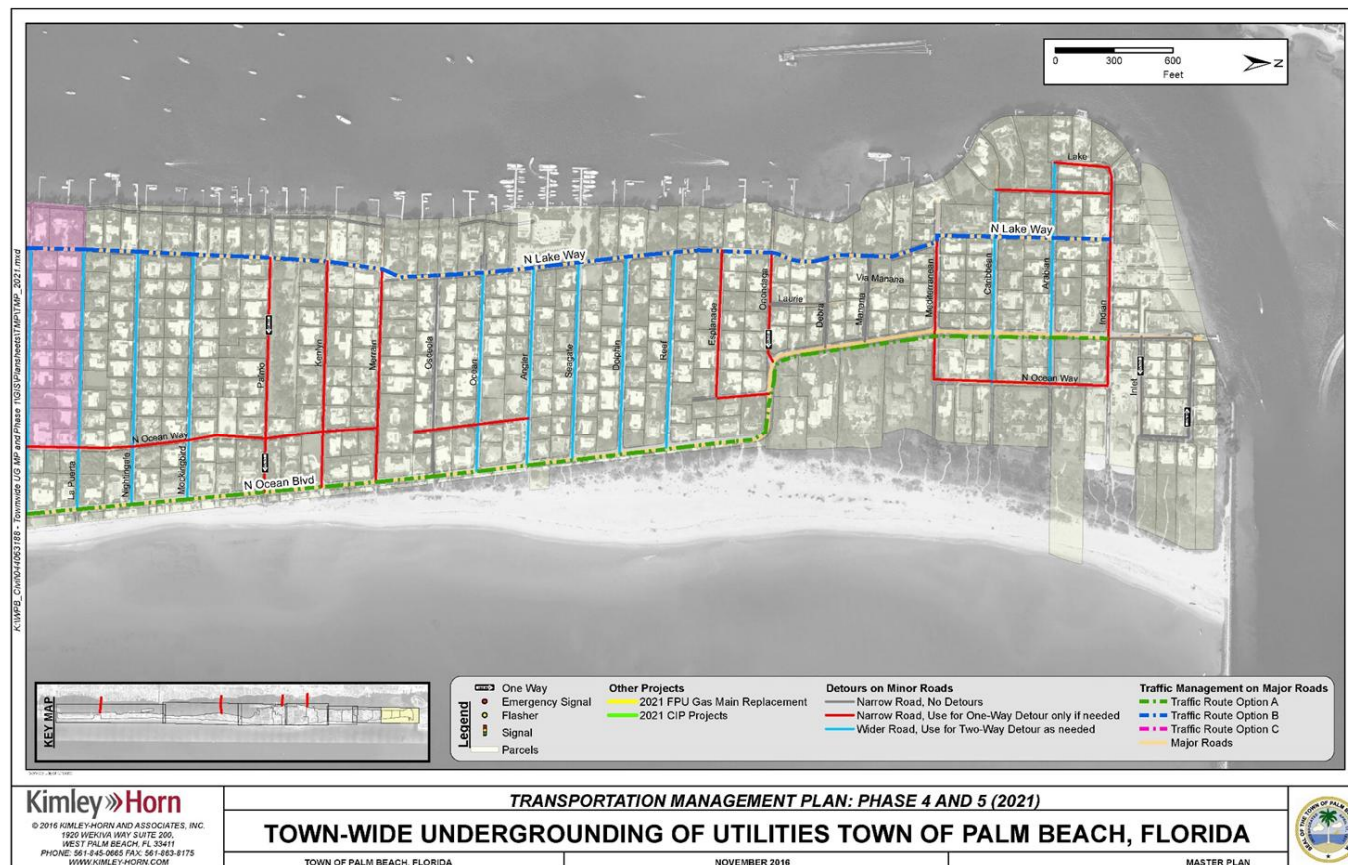
Chapter 8 – Risk Assessment





Master Plan Draft Document

Chapter 9 – Transportation Management Plan



Kimley»Horn

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Master Plan Draft Document

Chapter 10 – Public Outreach Program





Master Plan Draft Document

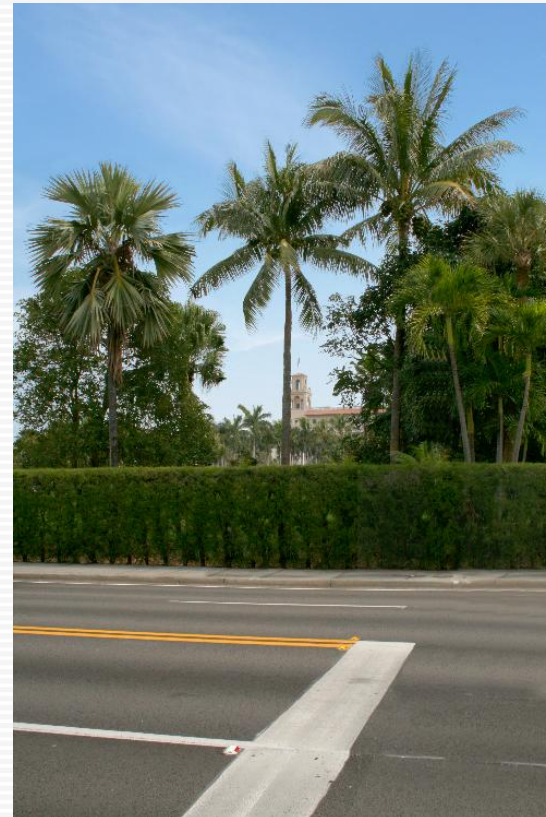
Chapter 11 – Overall Opinion of Schedule





Master Plan Draft Document

Chapter 12 – Overall Program Opinion of Probable Construction Costs





Master Planning Phase

Progress Update

- Overall Cost/Master Schedule Refinement
- Draft MP Document for UUTF review and comment
- Meetings with Communications providers
- Draft Broadband RFI completed and submitted to Town staff for review and comment





Master Planning Schedule

2016

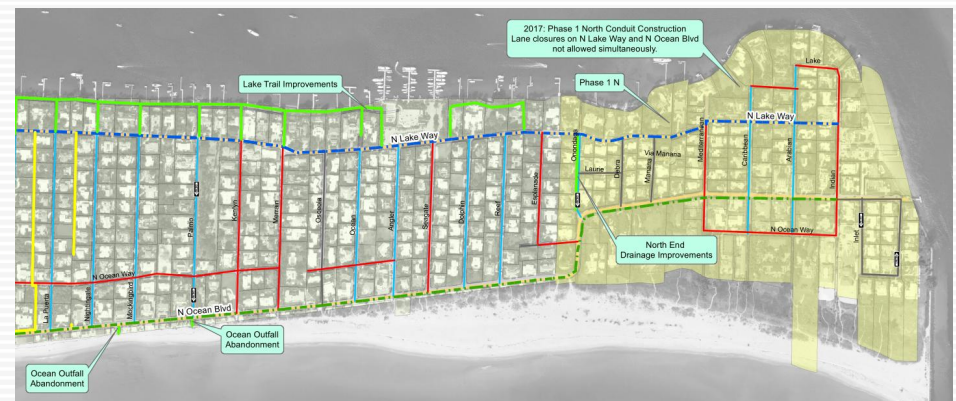
2017

TASK	JULY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MARCH	APR
Data Collection (Workshops/Field Reviews/Outside Projects)										
Future Communications Systems* Analysis										
Broadband Infrastructure Assessment										
GIS Base Map Development - Existing										
Concept Design/Master Plan										
Design Layout: FPL, ATT, Comcast, Lighting, Smart Poles, CC system and Competitor Communications										
Major Easement Identification										
Phase Selection and Development										
Develop Engineers OPC										
Master Schedule Development										
Assessment of Traffic Impacts										
Project Delivery Methods										
Master Plan Document										
UUTF Meeting to Present OPC / DRAFT MP										
Cost / Schedule Finalization										
UUTF Meeting to Present Final MP										
Town Council Meeting to Present Final MP										

Master Planning Phase

Moving Forward – February Tasks

- Continued meetings with utility owners to explore further opportunities to reduce costs
- Broadband Infrastructure Assessment RFI Advertisement





Detailed Design Phase

Progress Update

- CMAR advertisement and pre-proposal meeting
- Concept Conduit Plans received for the north and south ends (AT&T and Comcast)
- Bid Document submittal
- Easement Acquisition





Detailed Design Phase

Easement Acquisition Progress Update

Phase 1 North

Easements Required	48
Owners Contacted	39
Easements that have received Owner Approval and are in process	11
Fully Executed Easements Received	3

Phase 1 South

Easements Required	28
Owners Contacted	6
Easements that have received Owner Approval	5
Fully Executed Easements Received	0



Detailed Design Schedule

2016

2017

DETAILED DESIGN SCHEDULE NORTH END AND SOUTH END DESIGN	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
Data Collection/Geotech/GPR														
Site Survey														
ATT/FPL/COMCAST Coordination														
Easement Coordination/Procurement														
60% Construction Documents														
90% Construction Documents														
Final Construction Documents														
Permitting														
CMAR Procurement / Bidding /GMP														
UUTF Bid Award Review Meeting														
Town Council Award														
Start Construction														



Detailed Design Phase

Moving Forward – February Tasks

- FP&L/AT&T/Comcast final design detail coordination
- Easement Acquisition process continues
- Value Engineering continues
- CMAR evaluation and recommendation for award
- Progress/Coordination Meetings





Saves and Raves

Saves: For this program only, AT&T has agreed to modify their design standards that call for 2-4" conduits for their main line conduit runs to a single 5" conduit. This saves \$3 to \$9/LF depending on installation method.

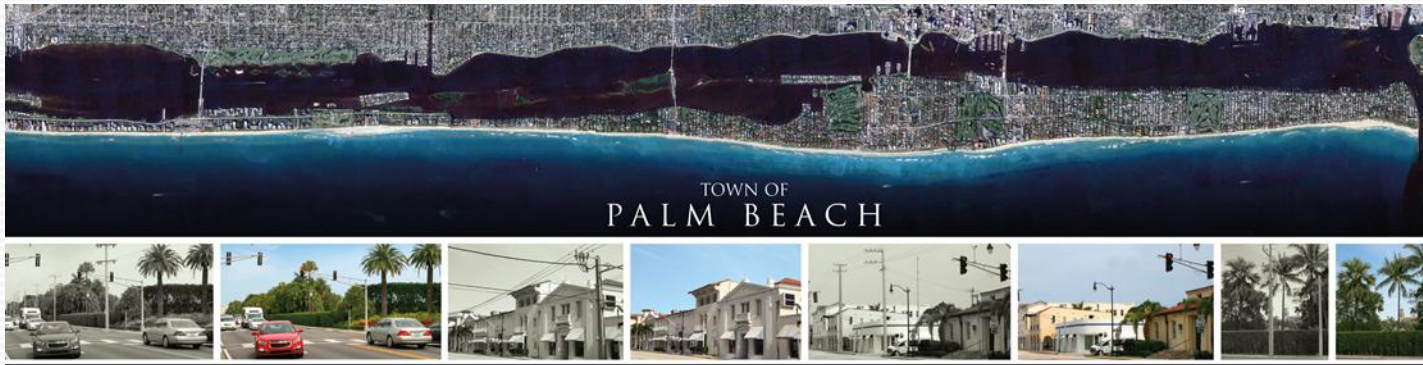
Raves: AT&T – Again. They delivered their design two days early and were willing to modify their design standards to help the Town achieve cost savings.



TOWN OF PALM BEACH

Town-Wide Undergrounding of Utilities Program

Conceptual Opinion of Probable Cost for the Undergrounding Program



TOWN-WIDE *Undergrounding of Utilities* MASTER PLAN



Kimley»Horn



Conceptual Opinion of Probable Cost for the Undergrounding Program

- Opinion of Probable Cost
- Assumptions and Qualifications
- Cost / Revenue Refinement
- Process Description



Conceptual Opinion of Probable Cost for the Undergrounding Program

Overall Program Opinion of Probable Cost Summary

Total Program Cost (Today's Dollars)	
Contingency	
Inflation (Projected)	
Program Total (Rounded)	



Conceptual Opinion of Probable Cost for the Undergrounding Program

Overall Program Opinion of Probable Cost Summary

Total Program Cost (Today's Dollars)	\$80,700,000
Contingency	
Inflation (Projected)	
Program Total (Rounded)	



Conceptual Opinion of Probable Cost for the Undergrounding Program

Overall Program Opinion of Probable Cost Summary

Total Program Cost (Today's Dollars)	\$80,700,000
Contingency	\$8,840,000
Inflation (Projected)	
Program Total (Rounded)	



Conceptual Opinion of Probable Cost for the Undergrounding Program

Overall Program Opinion of Probable Cost Summary

Total Program Cost (Today's Dollars)	\$80,700,000
Contingency	\$8,840,000
Inflation (Projected)	\$9,030,000
Program Total (Rounded)	



Conceptual Opinion of Probable Cost for the Undergrounding Program

Overall Program Opinion of Probable Cost Summary

Total Program Cost (Today's Dollars)	\$80,700,000
Contingency	\$8,840,000
Inflation (Projected)	\$9,030,000
Program Total (Rounded)	\$98,600,000



Conceptual Opinion of Probable Cost for the Undergrounding Program

Individual Phase Opinion of Probable Cost Summary

Phase 1 North	\$4,920,000	Phase 5 North	\$6,650,000
Phase 1 South	\$7,030,000	Phase 5 South	\$7,620,000
Phase 2 North	\$4,260,000	Phase 6 North	\$5,430,000
Phase 2 South	\$5,000,000	Phase 6 South	\$11,560,000
Phase 3 North	\$4,130,000	Phase 7 North	\$5,770,000
Phase 3 South	\$6,810,000	Phase 7 South	\$6,030,000
Phase 4 North	\$5,150,000	Phase 8	\$12,370,000
Phase 4 South	\$5,270,000		



Conceptual Opinion of Probable Cost for the Undergrounding Program

Assumptions and Qualifications (General)

- “Like for Like” Overhead to Underground Conversion
- Broadband Infrastructure
- Town Contractor will perform the bulk of the work
- Conduit will be installed in a joint trench
- Cost is based on the phased construction approach previously presented to the UUTF
- Legal Fees
- Landscape Screening
- Town Employees (Project Coordinator)



Conceptual Opinion of Probable Cost for the Undergrounding Program

Assumptions and Qualifications (General)

- Service Entrances
- Rear to Front Conversion
- Spare Conduit
- Pavement Management
- Street Lighting Impacts
- Lake Worth UG Segment
- Master Planning
- Project Contingency
- Market Fluctuations



Conceptual Opinion of Probable Cost for the Undergrounding Program

Assumptions and Qualifications (VE)

- Conduit vs. Direct Bury Cabling
- Direct Purchase of Materials
- Vista Switches / Standard Switches
- AT&T Design Standards
- Rear Easement Restoration



Opinion of Probable Line Item Cost Summary

Description	OPC	Original Budget	Diff.
Utility Conversion Cost - FPL	\$43,270,000	\$35,000,000	\$8,270,000
GAF Waiver	(\$11,200,000)	(\$7,947,169)	(\$3,252,831)
FPL Service Connections	\$4,020,000	\$10,075,000	(\$6,055,000)
Utility Conversion Costs – AT&T and Comcast	\$15,950,000	\$8,900,000	\$7,050,000
Restoration Costs	\$15,110,000	\$1,500,000	\$13,610,000
Pavement Milling/Resurfacing	-	\$12,840,000	(\$12,840,000)
Engineering/Surveying	\$7,060,000	\$6,632,000	\$428,000
Construction Administration	\$3,930,000	\$3,415,000	\$515,000
Legal Fees	\$2,000,000	\$4,285,000	(\$2,285,000)
Public Outreach	\$570,000	-	\$570,000
Contingency	\$8,840,000	\$14,939,966	(\$6,099,966)
Inflation	\$9,030,000	-	\$9,030,000



Conceptual Opinion of Probable Cost for the Undergrounding Program

Comparison Costs

2012 Edison Electric Institute Study
(Electric Conversion Only)

- \$190/LF Minimum Reported Cost (Urban)
- \$950/LF Maximum Reported Cost (Urban)
- \$238/LF Average (Palm Beach – Urban)



Conceptual Opinion of Probable Cost for the Undergrounding Program

Cost / Revenue Refinement

- Utility Owner Participation
- Broadband Revenue
- Grant Funding
- Palm Beach County Penny Sales Tax
- Surplus Real Estate



Conceptual Opinion of Probable Cost for the Undergrounding Program

Process Description

- Recent Cost Information from Similar Projects
- Comprehensive Cost Information
- Consistent Methodology for Cost Application



Conceptual Opinion of Probable Cost for the Undergrounding Program

Process Description

- Sample Project Areas
 - Single Family Residential
 - Multi-Family Residential
 - Mixed-Use Commercial



Conceptual Opinion of Probable Cost for the Undergrounding Program

Process Description

- Quantity Estimation



Conceptual Opinion of Probable Cost for the Undergrounding Program

Process Description

- Inflation



Conceptual Opinion of Probable Cost for the Undergrounding Program

Questions?