Alternative Uses of the ROW

Revisiting the DOT Approach to Small Wireless Permitting in the public ROW:

Municipal Interaction & DOT-Owned Infrastructure

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PRESENTATION OVERVIEW

• What is small wireless?
• Why is it important?
• DelDOT permitting
• ODOT permitting
• Lessons learned
• Challenges ahead
WHAT IS SMALL WIRELESS?

- More robust cellular communication
- Reduced power draw with increased bandwidth
- Closer to users (our smart devices)
- Can be placed on a wide variety of infrastructure in/near ROW
  - Utility poles
  - Street light poles
  - Traffic signal poles (?)
  - Camera poles (?)
SMALL WIRELESS ENTITIES

Service Providers:
- Verizon Wireless
- AT&T Mobility
- T-Mobile
- Sprint

Infrastructure Providers:
- Crown Castle
- Mobilitie
SMALL WIRELESS DESIGNERS

- Network Building and Consulting (NB+C)
- Pyramid Network Services, LLC
- Jacobs Engineering Group
- Tilson Technology Management
- HBK Engineering
WHY IS IT IMPORTANT?

- Potential to bring investment and generate new jobs
- Increase precision of emergency services such as 911 call dispatch
- Support of the rollout of 5G mobile networks
- Support Smart Cities Initiatives, such as autonomous vehicles
- Meeting demand of mobile networks for the wireless industry
WHY IS IT IMPORTANT TO DOTs?

• Protecting the integrity of the ROW for core utilities and DOT-owned infrastructure and equipment

• Protecting safety of travelers along roadways & sidewalks
  - ADA compliance/impacts

• Address concerns related to systemic overburden
  - Pole failure rates

• Maintaining local control of permitting process
  - Limit FCC intervention
DELDOT’S PERMITTING PROCESS

- All reviews and technical comments are performed by DelDOT’s consultant (JMT) on behalf of the affected DelDOT sections.

- Pre-submittal meeting between applicants, wireless company, designers, DelDOT Utilities, and JMT are encouraged before moving forward with actual submissions.
DELDOT’S PERMITTING PROCESS:

• Submission package required online (for each node):
  • $100 fee per node
  • Limited use and occupancy Agreement
  • Gatekeeping checklist and technical review checklist
  • Site plans
  • Other supporting docs
  • Any DeIDOT agreements

Utility Permitting Application (UPA)

Online database used for utility permit filing
DELDOT’S PERMITTING PROCESS:

- JMT performs 14-day gatekeeping review for completeness of application and notifies applicant.
- JMT conducts technical review and provides comments within 60 days.
  - Checklist driven

Gatekeeping & Technical Checklists:
To ensure DelDOT requirements are met
DELDOT’S PERMITTING PROCESS:

- Back & forth: 30 days for applicant revisions & responses and 15 days for review comments/approval (JMT).
- Collection of pre-construction info and GPS location of existing pole or proposed node.
- DelDOT approves application and issues permit once everything is properly addressed per JMT recommendation.
DELDOT’S PERMITTING PROCESS:

- Inspect installed small wireless facilities and obtain post-construction info and GPS location. JMT provides to DelDOT for GIS/mapping updates.

- DelDOT prepares invoice for actual expenses per node and bills the applicant/wireless company.
DELDOT’S PERMITTING PROCESS:

Checklists and processes baffled admin staff (INITIALLY), but the management teams recognized long-term value:

- Establishes a standardized process for consistency
- Demonstrate DelDOT’s commitment and proactive approach to up-front planning and investment
- Used similar language to the actual legislation, minimizing guess work, streamlining future submittals

JMT continues to refine workflows:

- Improving submissions, alerts/notifications, user-friendly interface, and clear document tracking
- Proactively improving review process (for JMT/DeLDOT and providers/consultants) reduce checklist fatigue via questionnaire
- Coordinating with small wireless providers to enhance quality and documentation
DELDOT’S Wireless Permits:

Permit applications submitted in 2018
- Gatekeeping reviews: 25
- Technical reviews: 25
- Resubmittal reviews: 18
- Approved permits: 18
- Withdrawn/denied permits: 7

Locations (nodes) discussed during pre-submittal meetings
- Scoping and planning development: 250+
- Inquiries to collocate or installation of new poles: 100+
- Permits in the works (finalizing documentation per checklist): 40+
ODOT’S PERMITTING PROCESS

- ODOT Central Office manages the initial request to place all wireless facilities
- Meetings are held with each company to discuss process
- Coordination with District offices to confirm location, project conflicts, or underlying issues with location
ODOT’S PERMITTING PROCESS

Application for new site:
- $1500 Application Fee
- $1500 Per Node Annual Rent – 2% Annual Escalator
- Small Cell Master License Agreement and Individual Site Agreement
- Site Plan
- NTP Checklist
- ODOT Right of Way Permit Application
District inspection of all installed sites

All maintenance and equipment modification requires an ODOT ROW Permit, and possibly agreement addendum

Currently reviewing first requests for locations that serve multiple carriers

ODOT future online permit system will reflect all site locations: 2020
Lessons Learned & Challenges

Pre-Submittal Meetings

• Key to establishing strong working relationships

• Understand provider’s requirements (priorities may not always align)

• Consolidate discussions to one, no-cost pre-submittal meeting for each applicant’s core team

• Working as partners and not looking for ways to hinder (follow the project mission and tone set by the legislation)

• Request sample plans to evaluate against submittal checklist

• Applicants add plan sheet references on checklists (for applicant’s QC check and ease of identifying required content/quicker review)
Lessons Learned & Challenges

Steer small wireless providers toward predictable success “In a reasonable way” if DOT-owned structures are cited

- Most favorable outcome (for DelDOT): Collocate and small wireless providers take ownership of light pole(s)
- Second favorable outcome: New poles that are breakaway
- Least preferred outcome: Collocate and DelDOT retains ownership

- Safety concerns
- Maintenance concerns
- Effect on functional use
Lessons Learned & Challenges

- Sample comments provided to small wireless providers
  - Submittal is one-shot upload, cannot piece-meal, i.e. “to be provided” or “available on request” is not acceptable
  - Protrusion of new meter install/mount could result in negative impact to pedestrian access route (ADA non-compliance)
  - Use of typical application (TA) for vehicular and pedestrian MOT is preferred over creating detailed MOT plans (for routine situations)
  - Breakaway poles shall be designed to meet AASHTO and MASH (Manual for Assessing Safety Hardware) characteristics
  - For poles with other existing wires, show how pole replacement will be phased
  - Any underground work would trigger need for documentation on plan. Include call-out of who will install/own underground segment
Lessons Learned & Challenges

- Collocations on DelDOT Structures
  - Existing loading conditions shall be examined and factored into structural analysis
  - Existing functionality and how the small wireless facility will impact that primary functionality
  - Implications of installing additional power or conduit inside of DOT infrastructure
Lessons Learned & Challenges

- Permits and Authorization
  - Multiple applications for one site or pole
    - First come, first served (priority given to deployment)
    - No hammer to force multi-party collocation on a specific pole/structure
  - Authorized Permits Shelf-Life
    - How long can a permitted site be left dormant, without construction, before permit termination?
    - DE code stipulates the priority is on implementation of functional networks, not quantity of permits
Lessons Learned & Challenges

- Municipal vs. DOT Jurisdiction
  - Clarify authority where both municipality and DOT share control of the ROW.
  - Applicant must fulfill both sets of permit requirements.
  - Consider issuing a Memorandum of Understanding.
- Concurrent permit review challenges
- Post Approval revisions to power/fiber
Lessons Learned & Challenges

Understand the complications and impacts on permitting

- Clarify the DOT’s role to ensure safety of the traveling public
- Provide guidance for determination of the ROW width
- Applicants are not clear on who “owns” the ROW or if jurisdictional limits are well established?
- DOT will exert permitting authority for safety: including where ROW ownership issues may arise
- FCC rulings and pending legal actions may alter the future of small wireless in public ROW
Questions?

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DelDOT Information on Small Wireless Facility Permitting:

WirelessPermits.DelDOT.Gov
DelDOT Webpage/Doing Business/Wireless/Wireless Permits